

# APPENDICES



## KING COUNTY 2020 **Strategic Climate Action Plan**



King County

**CLIMATE ACTION**

Clean Future. Strong Communities.





# 2020 SCAP Appendices

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# Appendix I: Glossary of Key Terms

<b>Adaptation</b>	In human systems, the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate. <sup>1</sup>
<b>Adaptive capacity</b>	The combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities. <sup>2</sup>
<b>Anthropogenic</b>	Made by people or resulting from human activities. Typically used in the context of emissions that are produced as a result of human activities. <sup>3</sup>
<b>Biogas</b>	Collected from natural decomposition processes of organic waste materials at landfills, wastewater treatment plants, and dairies. With limited or no cleaning, biogas can be used for heating and electricity generation.
<b>Carbon dioxide (CO<sub>2</sub>)</b>	A naturally occurring gas in the earth's atmosphere. It is also a byproduct of human activities such as burning fossil fuels. Carbon dioxide is the principal greenhouse gas produced by human activity. <sup>4</sup>
<b>Carbon footprint</b>	The total amount of greenhouse gases that are emitted into the atmosphere each year by a person, family, building, organization, or company. A person's carbon footprint includes greenhouse gas emissions from fuel that an individual utilizes directly, such as by heating a home or riding in a car. It also includes greenhouse gases that come from producing the goods or services that the individual uses, including emissions from power plants that make electricity, factories that make products, and landfills where trash gets sent. <sup>5</sup>
<b>Carbon neutral</b>	A process where there is no net release of CO <sub>2</sub> . For example, growing biomass takes CO <sub>2</sub> out of the atmosphere, whereas burning it releases the gas again. The process would be carbon neutral if the amount taken out and the amount released were identical. A company or country can also achieve carbon neutrality by means of carbon offsetting. <sup>6</sup>
<b>Carbon offsetting</b>	A way of compensating for emissions of CO <sub>2</sub> by participating in, or funding, efforts to take CO <sub>2</sub> out of the atmosphere. Offsetting often involves paying another party, somewhere else, to save emissions equivalent to those produced by your activity. <sup>7</sup>
<b>Carbon sequestration</b>	The process of storing carbon dioxide. This can happen naturally, as growing trees and plants turn CO <sub>2</sub> into biomass (wood, leaves, and so on). It can also refer to the capture and storage of CO <sub>2</sub> produced by industry. <sup>8</sup>
<b>Carbon sink</b>	Any process, activity, or mechanism that removes carbon from the atmosphere. The biggest carbon sinks are the world's oceans and forests, which absorb large amounts of carbon dioxide from the earth's atmosphere. <sup>9</sup>
<b>Climate</b>	Climate in a narrow sense is usually defined as the average weather, or more rigorously, as the statistical description in terms of the mean and variability of relevant quantities over a period of time ranging from months to thousands or millions of years. The classical period for averaging these variables is 30 years, as defined by the World Meteorological Organization. The relevant quantities are most often surface variables such as temperature, precipitation, and wind. Climate in a wider sense is the state, including a statistical description, of the climate system. In various chapters in this report different averaging periods, such as a period of 20 years, are also used. <sup>10</sup>
<b>Climate change</b>	A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use. <sup>11</sup> human activity. Global warming is one aspect of climate change. <sup>12</sup>

<b>Climate equity</b>	Climate equity ensures that all people have access and opportunity to benefit from climate solutions, while not bearing an unequal burden of the impacts of climate change. This requires a holistic approach to equity in climate work that divides the burden of responding to climate change amongst those who contribute the most to the issue, while sharing the opportunities and benefits that equitable climate action presents with those that are most impacted. <sup>13, 14</sup>
<b>Climate justice</b>	Climate justice is the application of racial, environmental, social, and economic justice to climate response, which recognizes the continued legacy of systems of oppression and environmental exploitation. This shift in approach widens the focus from reducing greenhouse gases and addressing climate impacts to include, at its heart, the leadership of people and communities most vulnerable to climate impacts. <sup>15</sup> Achieving climate justice means creating a just, healthy, sustainable future for everyone that recognizes economic, political, social, and civil rights.
<b>Consumption-based emissions</b>	Greenhouse gas emissions associated with goods and services. These include embodied emissions associated with the production, transportation, use and disposal of goods, food, and services.
<b>Disproportionate climate impacts</b>	Individual residents and communities will experience the impacts of climate change differently. Working to advance environmental justice will be important as the impacts of climate change will fall disproportionately on communities of color, immigrants, refugees, people with pre-existing health conditions, and lower income residents. <sup>16</sup>
<b>Embodied Carbon Emissions</b>	Carbon emissions that occur when extracting materials and making building products. <sup>17</sup>
<b>Emissions</b>	Greenhouse gases that are put into the atmosphere from human activities. The release of greenhouse gases and/or their precursors and aerosols into the atmosphere over a specified area and time period. <sup>18</sup>
<b>Energy efficiency</b>	Using less energy to provide the same service. <sup>19</sup>
<b>Environmental justice</b>	The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. <sup>20</sup>
<b>Extreme events</b>	A weather event that is rare at a specific place and time of year, including, for example, heat waves, cold waves, heavy rains, periods of drought and flooding, and severe storms. <sup>21</sup>
<b>Extreme precipitation events</b>	An episode of abnormally high rain or snow. The definition of "extreme" is a statistical concept that varies depending on location, season, and length of the historical record. <sup>22</sup>
<b>Fossil fuels</b>	Natural resources, such as coal, oil, and natural gas, containing hydrocarbons. These fuels are formed in the earth over millions of years and produce carbon dioxide when burned. <sup>23</sup>
<b>Fossil-based natural gas</b>	Comprised mostly of methane and other hydrocarbons, this gas is formed underground through the long decay of organic materials. This is the typical type of natural gas delivered to homes and businesses through an extensive nationwide piping network. Much of this gas is currently extracted through a process called hydraulic fracturing, or "fracking."



<b>Frontline communities</b>	Frontline communities are those that are disproportionately impacted by climate change due to existing and historic racial, social, environmental, and economic inequities, and who have limited resources and/or capacity to adapt. These populations often experience the earliest and most acute impacts of climate change, but whose experiences afford unique strengths and insights into climate resilience strategies and practices. Frontline communities include Black, Indigenous, and People of Color (BIPOC) communities, immigrants and refugees, people living with low incomes, communities experiencing disproportionate pollution exposure, women and gender non-conforming people, LGBTQIA people, people who live and/or work outside, those with existing health issues, people with limited English skills, and other climate-vulnerable groups.
<b>Greenhouse gases (GHGs)</b>	Greenhouse gases are those gaseous constituents of the atmosphere, both natural and anthropogenic, which absorb and emit radiation at specific wavelengths within the spectrum of thermal infrared radiation emitted by the Earth's surface, by the atmosphere itself, and by clouds. This property causes the greenhouse effect. Water vapor (H <sub>2</sub> O), carbon dioxide (CO <sub>2</sub> ), nitrous oxide (N <sub>2</sub> O), methane (CH <sub>4</sub> ), and ozone (O <sub>3</sub> ) are the primary greenhouse gases in the Earth's atmosphere. <sup>24</sup>
<b>Greenhouse effect</b>	Trapping and buildup of heat in the atmosphere (troposphere) near the earth's surface. Some of the heat flowing back toward space from the earth's surface is absorbed by water vapor, carbon dioxide, ozone, and several other gases in the atmosphere and then reradiated back toward the earth's surface. If the atmospheric concentrations of these greenhouse gases rise, the average temperature of the lower atmosphere will gradually increase. <sup>25</sup>
<b>Hazard Mitigation</b>	Hazard mitigation describes actions taken to help reduce or eliminate long-term risks caused by natural, manmade, or technological hazards, such as flooding, earthquakes, dam failure, or cyber incidents. <sup>26</sup>
<b>Just transition</b>	Just transition is a vision-led, unifying, and place-based set of principles, processes, and practices that build economic and political power to shift from an extractive economy to a regenerative economy. This means approaching production and consumption cycles holistically and waste-free. The transition itself must be just and equitable, redressing past harms and creating new relationships of power for the future through reparations. If the process of transition is not just, the outcome will never be. Just transition describes both where we are going and how we get there. <sup>27</sup>
<b>Methane</b>	Methane is the second most important man-made greenhouse gas. Sources include both the natural world (wetlands, termites, wildfires) and human activity (agriculture, waste dumps, leaks from coal mining). <sup>28</sup>
<b>Ocean acidification</b>	The process by which ocean waters have become more acidic due to the absorption of human-produced carbon dioxide, which interacts with ocean water to form carbonic acid and lower the ocean's pH. Acidity reduces the capacity of key plankton species and shelled animals to form and maintain shells. <sup>29</sup>
<b>Ozone</b>	A colorless gas consisting of three atoms of oxygen, readily reacting with many other substances. Ozone in the upper atmosphere protects the earth from harmful levels of ultraviolet radiation from the sun. In the lower atmosphere, ozone is an air pollutant with harmful effects on human health. <sup>30</sup>
<b>Particulate matter (PM)</b>	Very small pieces of solid or liquid matter such as particles of soot, dust, fumes, mists, or aerosols. The physical characteristics of particles, and how they combine with other particles, are part of the feedback mechanisms of the atmosphere. <sup>31</sup>
<b>Pre-industrial levels of carbon dioxide</b>	The levels of carbon dioxide in the atmosphere prior to the start of the Industrial Revolution. These levels are estimated to be about 280 parts per million (ppm) (by volume). The current level is around 380 ppm. <sup>32</sup>
<b>Preparedness</b>	Actions taken to build, apply, and sustain the capabilities necessary to prevent, protect against, and ameliorate negative effects. <sup>33</sup>

<b>Renewable energy</b>	Renewable energy is energy created from sources that can be replenished in a short period of time. The five renewable sources used most often are biomass (such as wood and biogas), the movement of water, geothermal (heat from within the earth), wind, and solar. <sup>34, 35</sup>
<b>Renewable hydrogen blended natural gas</b>	The blending of up to 15 percent hydrogen into existing natural gas supplies. The hydrogen is created by renewable energy sources, for the purpose of reducing greenhouse gas emissions related to natural gas consumption.
<b>Renewable natural gas</b>	The term for biogas from landfills, wastewater treatment plants, dairies, and other anerobic digestion processes that has undergone extensive purification to meet quality standards such that it can be injected into natural gas pipelines as a direct substitute for fossil-based natural gas.
<b>Resilience</b>	Resilience is a broad concept that can apply to individuals, communities, and social, economic, and environmental systems. Resilience is the capacity to cope with a hazardous event or long-term trend in ways that maintain essential identities, functions, and structures while also maintaining the capacity to learn, adapt, and/or transform. <i>(Adapted from IPCC 2014)</i> <sup>36</sup>
<b>Risk</b>	Risks are threats to life, health and safety, the environment, economic well-being, and other things of value. Risks are often evaluated in terms of how likely they are to occur (probability) and the damages that would result if they did happen (consequences). <sup>37</sup>
<b>Sea level rise</b>	An increase in the mean level of the ocean. Eustatic sea level rise is a change in global average sea level brought about by an alteration to the volume of the world ocean. Relative sea level rise occurs where there is a net increase in the level of the ocean relative to local land movements. Climate modelers largely concentrate on estimating eustatic sea level change. Climate impact researchers focus on relative sea level change. <sup>38</sup>
<b>Social vulnerability</b>	Every community must prepare for and respond to hazardous events, whether a natural disaster like a tornado or disease outbreak, or a human-made event such as a harmful chemical spill. A number of factors, including poverty, lack of access to transportation, and crowded housing may weaken a community's ability to prevent human suffering and financial loss in a disaster. These factors are known as "social vulnerability." <sup>39</sup>
<b>Storm surge</b>	The temporary increase, at a particular locality, in the height of the sea due to extreme meteorological conditions (low atmospheric pressure and/or strong winds). The storm surge is defined as being the excess above the level expected from the tidal variation alone at that time and place. <sup>40</sup>
<b>Stressor</b>	Something that affects people and on natural, managed, and socioeconomic systems. Multiple stressors can have compounded effects, such as when economic or market stress combines with drought to negatively impact farmers. <sup>41</sup>
<b>Urban heat island effect</b>	The relative warmth of a city compared with surrounding rural areas, associated with changes in runoff, the concrete jungle effects on heat retention, changes in surface albedo, changes in pollution and aerosols, and so on. <sup>42</sup>
<b>Vector-borne diseases</b>	An organism, such as an insect, that transmits disease-causing microorganisms such as viruses or bacteria. Vector-borne diseases include, for example, malaria, dengue fever, and Lyme disease. <sup>43</sup>
<b>Vulnerability</b>	The degree to which physical, biological, and socioeconomic systems are susceptible to, and unable to cope with, adverse impacts of climate change. <sup>44</sup>
<b>Weather</b>	The state of the atmosphere regarding temperature, cloudiness, rainfall, wind, and other meteorological conditions. Weather is not the same as climate, which is the average weather over a much longer period. <sup>45</sup>

## Appendix I Endnotes

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## Appendix II: 2020 SCAP Improvements

*King County advanced the following 2015 SCAP strengths and worked toward several 2020 SCAP improvements as summarized below.*

### Strengths of the 2015 SCAP continued in the 2020 SCAP

**Transparency.** Establishment of clear measures for target outcomes and an accountability framework for reporting performance on internal and external target outcomes.

**Concept of “ambitious and achievable” drives actions.** Targets and actions are informed by what is technically possible and what is needed to achieve long-term outcomes, allowing for the setting of some “stretch” targets.

**Comprehensive view of climate change action.** The County takes a wide view of climate change action rather than a narrow view (e.g., providing a coordinated and flexible structure for multiple and varied climate actions across departments and sectors rather than focusing on a singular issue or a narrow set of issues).

**Work at two scales.** The County recognizes the need to amplify progress by working at both the internal County operations scale and the countywide and regional scales.

**Weave climate considerations and commitments throughout all King County operations.** Climate actions are institutionalized into internal County operations through an inter-department team structure.

### 2020 SCAP Improvements

**Enhanced public stakeholder and community engagement in development of the 2020 SCAP.**

Improved outreach and inclusion efforts, including multiple forums to bring community and partner voices into up-front planning and development of the 2020 SCAP.

**Integrated and prioritized equity-driven climate strategies.** Aligned climate change actions with the County’s 2016 [Equity and Social Justice Strategic Plan](#) and the 2018 [Blueprint for Addressing Climate Change and Health](#) published by Public Health—Seattle & King County.

**Updated strategies, priority actions, target outcomes, and vision statements.** Analyzed what is working, what is not working, what needs to be improved upon, and what needs to be added.

**Partnered with frontline communities.** Co-developed a new framework for activating community-driven and grassroots-scale understanding of climate impact problems, priority actions, and target outcomes.

**Updated countywide GHG reduction target outcomes.** Worked with partners to update community-scale emissions targets and countywide-scale emissions targets, embracing scientific and technological innovations.

**Improved accountability.** Made the plan more ambitious, outcomes-focused, achievable, and accountable to a broader range of stakeholders.

**Embraced new tools for integration of climate change knowledge in County operations.** Supported the creation of tools and recommendations that will help County departments to integrate climate change awareness and strategies in their plans and processes.



***Expanded innovative funding approaches.*** Bold and sustainable revenue to implement climate priorities is critical to advance the SCAP. The 2020 SCAP includes recommendations both at the countywide scale, such as restoration of the Conservation Futures Tax to fund the Land Conservation Initiative, and operational strategies, such as adding new flexibility to the Fund to Reduce Energy Demand, an internal program that finances efficiency projects that result in cost savings.

***Integrated climate change information and solutions within and across County departments.*** The 2020 SCAP recognizes that success in achieving climate action goals requires mindful integration of climate change information and solutions across all County departments and programs, including the incorporation of information on community-level climate impacts and climate change preparedness work with communities in day-to-day County operations.

***Improved internal County agency responsibility for SCAP implementation.*** Built momentum for an integrated model for sharing climate information and actions across County departments and agencies, increasing the responsibility assumed by such departments and agencies for successful climate outcomes.

## Appendix III: King County's Approach to Climate Action

*King County has embraced a distributed approach to acting on climate change, in an effort to breakdown silos and ensure that climate action is embedded throughout the work of the government.*

### Integrated Approach to Climate Action

King County established an interdepartmental Climate Leadership Team (CLT) in 2014 to frame policy choices, make recommendations to the Executive, allocate resources to implement priority actions, and oversee development of the SCAP. The CLT is made up of leadership from the Office of the Executive and County departments and has grown over the years to include more County department representatives. The CLT is a working committee that meets at least monthly and has decision-making power, including oversight of a cost-shared budget for climate action contributed to by multiple departments.

### Inter-Agency Staff Team

The CLT is staffed and supported by an interdepartmental staff team called the "Climate Action Team." Climate Action Team positions are embedded in County agencies with primary responsibility for climate action leadership and they carry out activities to support the achievement and integration of SCAP priority actions across County departments. Three Climate Action Team leads have responsibility for the three sections of the 2020 SCAP. This innovative model for tackling climate change challenges in a large county government places climate work closer to daily operations, work plans, programs, and decision-making processes, and has been extremely effective integrating or "mainstreaming" climate change work across County departments.

### Embrace Collaboration

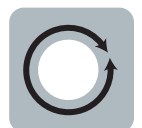
External partnerships are foundational to the County's climate work. Although not representative of all County's climate partnerships, the following three collaborative efforts are particularly important for developing and advancing SCAP priorities:

#### *Embrace Collaboration* COUNTY CLIMATE PARTNERSHIPS

##### ***King County-Cities Climate Collaboration (K4C)***

The K4C is a partnership between the County, sixteen cities, and the Port of Seattle to coordinate and enhance local government climate and sustainability efforts. Through focused, coordinated action, K4C is committed to maximizing the impact of individual and shared efforts. In 2019, K4C partners updated shared actions to reduce GHG emissions and accelerate progress toward a clean and sustainable future. This update to the K4C's Joint County-City Climate Commitments ("Commitments") reflected changes in the regulatory landscape, technical developments, and updated emissions information.

The principles and actions of the K4C are focused on practical, near-term, collaborative opportunities between partners and King County. This shared vision builds on the significant work that many K4C partners and the County are already undertaking. K4C partners that have signed on to the Commitments will actively pursue those strategies, policies, and actions to make the most impact given the size, location, and development patterns of their jurisdictions. The updated GHG emissions reduction pathways established by K4C in the Commitments frame each GHG reduction focus or goal area of the 2020 SCAP. Many SCAP strategies and priority actions also mirror the K4C commitments and are flagged with a "K4C Alignment" icon.



K4C

***Puget Sound Climate Preparedness Collaborative***

Established in October 2017, this partnership seeks to enhance coordination and improve climate change preparedness outcomes in the Puget Sound region. The Puget Sound Climate Preparedness Collaborative currently includes 21 member organizations and partners representing five counties of the Puget Sound region, three municipalities, a growing number of tribal governments, and regional organizations such as Port of Seattle, Northwest Seaport Alliance, and Sound Transit. A major strategic focus is building local awareness and regional capacity for climate preparedness and serving as a catalyst for advancing preparedness policies and actions across jurisdictions. King County serves as co-chair for the collaborative.

***Climate Equity Community Task Force (CECTF)***

This is a new task force partnership formed in Spring 2019 specifically to guide development of the new section of the 2020 SCAP entitled “Sustainable & Resilient Frontline Communities.” Approximately 22 multi-ethnic and multi-racial community leaders brought experiences, unique strengths, and insights into climate resilience strategies and practices. These leaders formed the Climate Equity Community Task Force (CECTF), representing frontline communities—those that are disproportionately impacted by climate change due to existing and historic racial, social, environmental, and economic inequities, and who have limited resources and/or capacity to adapt.

The CECTF collaborated with the King County Climate Action Team over the last year and a half to co-develop the SRFC focus areas, priority actions, and activities. The CECTF will pivot toward supporting implementation of and accountability for the SRFC section and the 2020 SCAP. King County believes that authentic partnerships with frontline communities will ensure their representation in climate change work, the mitigation of environmental injustices, and equitable distribution of environmental benefits.

**Commitment to Transparency and Accountability.** King County is committed to the following internal and external accountability and transparency practices in the implementation of the SCAP:

- Every two years, a public report is transmitted to the King County Council for review at legislative sessions that are open to the public. Members of the public are always welcome to ask questions or comment at such sessions. The 2020 SCAP meets biennial reporting requirements of King County Code 18.50, providing an update on performance for 2015 SCAP priority actions, target measures, and outcomes.
- CLT continuously tracks progress on the SCAP. As an internal decision-making body, the CLT works with the inter-agency Climate Action Team staff to consider adjustments to actions and budget recommendations based on plan progress and new opportunities or obstacles.
- Starting with the 2020 SCAP, frontline community leaders and residents will have the opportunity to track the progress of priority actions in the new SRFC section. CECTF will continue to work with County staff as active partners in implementing and assessing plan progress.

# Appendix IV: 2015 Strategic Climate Action Plan Accomplishments

*This appendix highlights accomplishments, current actions, and programs related to commitments made in King County's 2015 Strategic Climate Action Plan (2015 SCAP). The 2020 Strategic Climate Action Plan (2020 SCAP) both builds on these programs and accounts for lessons learned over the past five years as these actions have been adopted. Data and information about 2015 SCAP performance measures are also included within the main body of the 2020 SCAP.*

*Highlights are organized in the same structure as the 2020 SCAP, starting with greenhouse gas-related accomplishments. **Note that the Sustainable & Resilient Frontline Communities section is a new section in the 2020 SCAP; therefore, details about work related to this section are not included in this appendix.***

## Reducing Greenhouse Gas Emissions

### Focus Area 1: Greenhouse Gas Targets and Policy

#### Began to Use King County “Shadow Price of Carbon” in Decision-Making

In January 2018, Executive Constantine approved a proposal to implement a consistent, countywide shadow price of carbon and establish internal carbon reduction fees on vehicle and building emissions. This was a priority action in the 2015 SCAP. A shadow price of carbon sets a price per unit of carbon for use in decision-making and alternative analysis without charging an actual fee.

King County uses the State of Washington's social cost of carbon, which is adjusted annually. Fleet Services has incorporated the shadow cost of carbon into life cycle costs analyses when adding new technologies to the fleet. In the 2019/2020 biennium, Fleet Services also established an internal carbon fee based on the incremental vehicle emissions that exceeded the 2015 SCAP goal. The funds collected were used to plant trees in support of the County's 1 Million Trees initiative.

#### Stronger Fossil Fuel Policies and Guidelines

Through the 2020 King County Comprehensive Plan update, King County adopted new polices, regulations, and permitting guidelines to ensure protection of public health and safety, air and water quality, and habitats from the impacts of fossil fuel extraction, processing, production, transport, storage, and use. The stronger elements adopted in the County's land use and development regulations make it more difficult to expand or develop major fossil fuel infrastructure, such as oil and gas terminals or storage facilities, in the county. The updated regulations also effectively prohibit developing new or expanding existing coal mines in King County.



County  
Operations



County  
Operations

## Focus Area 2: Transportation and Land Use



### Metro Transit Named Best Large Transit Agency in North America

Metro Transit operates a transportation system that provides half a million rides every weekday and is nationally recognized for its performance, lowering the region's transportation emissions substantially. In 2018, the American Public Transportation Association named Metro the best large transit system in North America for its achievements in ridership, safety, innovation, sustainability, and equity.



Countywide

### Grew Transit Ridership Year-Over-Year

Ridership in King County has increased year-over-year from 2010 through 2018; however, starting in 2015, the growth in ridership has not kept pace with population growth. Transit ridership is on the decline nationwide and its growth is also slowing in King County. External factors such as lower fuel costs, increased teleworking, higher car ownership, and the rise of alternatives such as Uber and Lyft are contributors to this trend. For Metro, factors such as service levels, safety, and real time information pose challenges to growing ridership and providing mobility to all residents of King County.



Countywide

### Improved conditions to walk, roll, and bike to transit through Safe Routes to Transit (SR2T) Program

Since 2017, Metro has been partnering with jurisdictions to design and build safe and convenient bike and walk connections to transit services. Projects have been completed in Federal Way, Redmond, Seattle and Skyway, and are underway in Tukwila, Bellevue and White Center. These projects added or improved sidewalks, pedestrian crossings and bike facilities to help people reach services safely. More Safe Routes to Transit projects are planned to target areas with priority populations, including Renton, Kent and Auburn to support a major service restructure; Skyway; and Des Moines (in conjunction with Sound Transit). Through 2019, Metro has passed-through about \$2.8M in grants and local funds for such projects, with up to \$2.9M planned in 2020-21. Metro also incorporates access improvements in RapidRide projects, thus far including plans for RapidRide H, I and R lines.



Countywide

### Shifted Single-Occupancy Rides to Transit

King County Metro promotes the capacity of individuals to consistently choose mobility options that reduce their reliance on single-occupancy vehicles through partnerships with cities, community groups, and organizations for campaigns: Just One Trip; In Motion; and ORCA Youth and Schools strategy. In 2018, King County Metro brought its long-standing In Motion program to Kent Valley and South Bellevue. This program reaches out to residents, students, and employees to invite them to try out alternatives to driving alone and shifted over 5,000 drive-alone trips to another option, as recorded by participants online, saving 54,000 vehicle miles, 2,500 gallons of gasoline, and 49,000 pounds of carbon dioxide emissions.



Countywide

### Launched “Feeder to Fixed” Service Pilots

From 2018 to 2019, Metro piloted its Ride2 Program to research and test on-demand, feeder-to-fixed route shuttles in Eastgate and West Seattle. The pilot aimed to reduce traffic congestion, facilitate transit use, and manage parking resources. With Ride2,



Countywide



customers could request a ride to or from a transit hub within a defined service area using a smartphone app or call center. Rides were designed to be shared, with multiple customers riding together. Metro received funding for the program from the Seattle Transportation Benefit District. The Ride2 Pilot Program lasted for a year and provided Metro with valuable data to inform future programming to meet customers' needs.

### **Launched Via to Transit Pilot to Support Car-Free Lifestyle**

In April 2019, Metro launched [Via to Transit](#), a pilot project aimed at making it more convenient for customers to connect with the region's growing high-capacity fixed-route transit system. Customers in the service areas can use the Via app or call customer support to request a ride to or from several Link light-rail stations where they can board buses or a Link train. Via to Transit makes it easier for customers to access transit and live car-light or car-free lifestyles. Seventeen percent of riders used Via to Transit to replace single-occupancy vehicle or Uber/Lyft trips and 22 percent were new users to the stations. Metro chose to pilot this service in priority neighborhoods, as defined by high percentage of low-income people, people of color, and people with limited English proficiency and with limited mobility options.



### **Increased Mobility through ORCA LIFT Fare Subsidy**

In 2020, Metro is planning to launch the ORCA LIFT subsidy program, aiming to increase mobility for tens of thousands of people in extreme poverty, enabling connections to services, employment, and education. Eligible customers receive a fully subsidized transit pass, good for one year of unlimited rides on Metro and Sound Transit services. Those earning 80 percent of federal poverty or less are eligible for the program and can enroll at Department of Social and Health Services (DSHS), Public Health - Seattle & King County, and Catholic Community Services offices around the region.



With support from Robert Wood Johnson Foundation's Evidence for Action initiative, Metro will apply a rigorous and participatory evaluation strategy to determine if the program is meeting the goals of increasing mobility, health, and quality of life for participants. The program was developed in response to a County Council proviso and engagement with community partners and customers. A Stakeholder Advisory Group, which included 31 diverse organizations, provided input to program design and priorities. Customers provided feedback and input through conversations led by community partners and through a survey. County Council unanimously approved the program proposal in 2020.

### **Focused on Zoning for Density in the Urban Core**

King County, working with its cities, focused growth in cities and unincorporated urban areas. Cities have zoned for increased capacity, and the County has supported this by retaining lower densities, larger lot sizes, and strategic approaches to investments in rural areas that minimize growth pressure. The County has also implemented very strong land use measures to protect natural resource lands, along with programs to support farms and farming. Combined, these approaches have successfully focused growth into the urban growth area, consistent the Countywide Planning Policies and the Growth Management Act.



### **Focused on Transit-Oriented Development**

King County has prioritized Transit-Oriented Development since the 2015 SCAP, to increase ridership opportunities close to new growth. Metro established a staff advisory group to develop a Metro Equitable Transit-Oriented Development Policy. This group produced a draft policy; an external engagement plan to refine the policy is underway. In addition, at



the Northgate transit center, King County Metro Transit released a developer solicitation for transit-oriented development, in partnership with funders at the Department of Community and Health Services and the City of Seattle, to include at least 200 units of affordable housing to householders making at or below 60 percent of the area median income at no cost to the developer.

### **Launched the Trailhead Direct Program to Increase Access to Trailheads**

Trailhead Direct started with a single-route feasibility test in 2017 in response to dangerous overcrowding and illegal parking at popular trailheads. In 2018, King County Metro and Parks launched a two-year pilot project, in partnership with REI Co-op and Clif Bar & Company. The program has been a booming success in both increasing access to outdoor recreation opportunities, and in reducing single-occupancy vehicle trips. In the second season of the program, passengers boarded Trailhead Direct for more than 17,500 hikes, a 75 percent increase over its first year.



Countywide

### **Planned for Fleet Electrification**

In 2020, the King County Council adopted Ordinance 19052 to accelerate the adoption of electric vehicles. The ordinance established the following goals for King County fleet electrification: a 100 percent zero-emission revenue bus fleet by 2035; a 67 percent zero-emission ADA paratransit fleet by 2030; a 100 percent zero-emission rideshare fleet by 2030; installation of 125 chargers at King County-owned park-and-rides by 2030; 50 percent of light-duty County fleet vehicles to electric by 2025 and 100 percent by 2030; 50 percent of medium-duty vehicles are transitioned to electric by 2028 and 100 percent by 2033; 50 percent of heavy-duty vehicles are transitioned to electric by 2038 and 100 percent by 2043; and installation of 150 chargers by 2030 in County facilities.



County Operations

In support of this initiative, King County Metro will purchase additional battery electric buses for service in 2021, with a focus on operations in south King County to improve air quality in the neighborhoods most in need of decreased pollution. To help inform its battery bus purchase and operations, Metro conducted a test of 10 leased battery electric buses from three manufacturers.

Other fleet electrification initiatives at the County include:

- Metro is conducting a study of the feasibility and strategic approach for transitioning its non-fixed route bus fleets to zero emissions.
- Metro is upgrading vehicle chargers at sites throughout King County, including at Metro park-and-rides, and other County facilities.
- The Facilities Management Division is conducting an electric vehicle infrastructure analysis and implementation study for County facilities that supports the fleet electrification goals, which will outline the infrastructure development, financial investment, financing options, policy changes, and technical resources needed to support fleet electrification in County buildings.
- Metro's Mobility Services is piloting ten plug-in hybrid Chrysler Pacificas in their Rideshare fleet.

### **Improved Travel Planning and Efficiency with Automatic Vehicle Location System**

The Fleet Services Division partnered with Transit Non-Revenue Vehicles, the King County International Airport, and the Solid Waste Division to implement an Automatic Vehicle Location (AVL) System for non-revenue vehicles. This initiative equipped King County's non-revenue vehicles with hardware devices and deployed a web-based platform to view real-time and historical vehicle data. The AVL System has automated data collection to drive decisions on issues such as right-sizing the fleet, minimizing fuel consumption and greenhouse gas emissions, and leaner management of field operations. Using this innovative technology will help County agencies optimize routing and dispatch, improve response times, facilitate data-driven capital and operating decisions, and expedite sharing of accurate real time service information (such as snow plowing) with the public.



County Operations

## Focus Area 3: Building and Facility Energy Use



### Supported Energy Efficiency through K4C and Local Codes

Energy use in buildings at the countywide scale rose through 2019 due to continued population growth and construction in King County. While building codes continue to get stronger for new construction, much work needs to be done to retrofit the existing commercial and residential building stock. King County and other members of the K4C have been active in supporting stronger national and state energy codes that set the foundation for efficient local codes.



Countywide

### Worked to Eliminate Financing Barriers to Efficiency Retrofits

Several challenging barriers exist that slow the current pace of home and commercial building efficiency retrofits, despite the clear benefits of clean indoor air, comfort, and financial savings from reduced energy consumption. King County is working to overcome the information and financing barriers that prevent more residents and business owners from investing in their homes and facilities.



Countywide

### Tracked Legislation and Supported Utility Programs to Reduce Fossil Fuel use in Buildings

In 2015, carbon emissions from fossil-fuel natural gas were 29 percent of all residential and commercial emissions in King County and rose in 2017 to 35 percent. As electricity supplies become cleaner through the passage of the Clean Energy Transformation Act, there is an additional benefit of replacing fossil fuel uses with an increasingly clean electrical energy. Other state legislation passed in 2019 calls for increased utility efficiency targets for fossil fuel natural gas. King County seeks to work in partnership with the utilities and communities to develop awareness and programs that will save residents and businesses energy and money



Countywide

### Advocated for Clean Electricity Programs and Policies

Although installed residential and commercial solar capacity has grown every year since 2015, increasing to 57 MW and meeting the goals of the 2015 SCAP Countywide Buildings and Facility Energy Measure 2, it remains a very small percentage of the overall electricity mix. However, interest in solar energy is strong among King County residents. King County is seeking to work with utilities on public-private partnerships to develop medium- to utility-scale systems on County land or facilities. Under this program, the utility's customers would purchase the renewable energy from the utility, enjoying the benefit of solar energy with no upfront cost or work involved with installing a rooftop system.

King County continues to advocate at the state level for policies that will create a stable regulatory environment, spurring commercial and residential solar in the County, providing for equitable access to solar, and creating or retaining family wage jobs that are supported by the industry.

In 2019, King County received Silver Sol Smart community designation from the Department of Energy, reflecting simplification of codes and processes to speed up permitting and reduce the time and paperwork need to develop a solar system installation.

In 2019, the Washington State legislature passed the Clean Energy Transformation Act (E2SSB 5116) that mandates that utilities provide a 100 percent energy supply from non-carbon emitting sources by 2045. The act sets interim targets that eliminate coal from the electricity supply by 2025 and that



Countywide

utilities provide 80 percent carbon-free electricity by 2030. With successful implementation of this bill, and other measures already in process, the County's electricity supply nearly achieves the goal of 90 percent renewable electricity countywide as set by the 2015 SCAP Target 2 & K4C Joint Commitments Measure: Increase countywide renewable electricity use 20 percent beyond 2012 levels by 2030; phase out coal-fired electricity source by 2025; limit construction of new natural gas-based electricity power plants; support development of increasing amounts of renewable energy resources.

Executive Constantine and other elected officials strongly supported this bill and other bills that protect clean air and advance a clean energy economy. The Executive and elected officials from the K4C testified in person at nine hearings, made phone calls to individual state legislators, and signed a joint letter of support for the Clean Energy Transformation Act. The strong representation of local elected leaders had a significant impact on the passage of the CETA and other bills.

### **Increased the County's Operating Energy Reduction Goals and Financed Improvement Projects**

King County's agencies are focused on reducing energy use and taking actions to consume cleaner and less carbon-producing energy sources. A key benchmark for performance under the 2015 SCAP was the reduction of energy use in existing county facilities, which is targeting a 7.5 percent reduction by the end of 2020. This 2020 SCAP increases the 2025 goal that was set in the 2015 SCAP from a reduction of 10 percent to 12.5 percent, compared to the 2014 baseline.



Each County agency has a variety of ways by which they make progress to reduce energy use, reflecting the diversity of operations and agency-specific issues. Savings opportunities vary based the intensity of past efficiency work, facility designs, asset age, and types of energy-consuming equipment. For example, there are big differences between: industrial pumping and wastewater treatment equipment in the Wastewater Treatment Division; roadway lighting and traffic control equipment in the Road Services Division; typical commercial office operations of downtown Seattle county office buildings; and 24/7 operations of correctional facilities. Yet, common needs like lighting, ventilation, and water and space heating exist across all types of facilities. County staff continually work to identify and capture savings opportunities appropriate to their agency's operations.

To make investments in energy reduction actions, agencies can apply for financial resources. These resources include agency operating and capital budgets, along with the County's Fund to Reduce Energy Demand (FRED), an internal loan program through which the county issues bonds to fund projects. FRED loans fund projects that have paybacks of 10 years or less, with annual loan payments covered by utility bill savings. As of 2020, the FRED program has been expanded by the County to allow loans of up to 20 years. Longer-term loans support further progress toward County energy goals by investing in cost effective projects with longer service lives and longer paybacks, such as solar panel installations and mechanical system upgrades. Between 2015 and 2020, over \$9.6 million was invested in projects through the County's internal FRED program.

### **Reduced Fossil Fuel use in County-Owned Buildings and Facilities**

In recent years, King County has pursued fossil fuel reduction actions in its buildings and facilities. Examples including installations of high efficiency and/or condensing boilers and hot water tanks, and the conversing of natural gas mechanical systems to high efficiency heat pump and heat recovery technologies. The handful of County buildings that have completed natural gas heating-to-heat pump retrofits have been able to significantly reduce energy use in the facilities. A proactive approach and new investments will be necessary to make further progress to reduce natural gas and propane use.



## Expanded Production of Renewable Energy, Became one of Country's Largest RNG Producers

King County's Cedar Hills Landfill and wastewater treatment plants have the potential to create and utilize significant volumes of renewable energy from the waste products handled in their operations.



County  
Operations

At Cedar Hills, after being buried solid waste begins a long-term decomposition process that results in the generation of methane. At the South Wastewater Treatment Plant, solids captured during the treatment process are placed in anaerobic digesters. The biogas generated by anaerobic digestion at both facilities reaches a Renewable Natural Gas (RNG) quality that meets or exceeds the quality of standard natural gas that is delivered to homes and businesses through pipelines. Collectively, the biogas originating from the County's Cedar Hills Landfill and South Wastewater Treatment Plant result in King County being one of the largest producers of RNG in the country.

In addition to generating RNG, the County's wastewater treatment facilities use biogas for the generation of electricity (West Point and South Plant) and facility heating (Brightwater, South Plant, and West Point). King County is also a large generator of solar energy at its facilities, with plans in place for additional solar panels at existing facilities, and new construction projects striving for net zero energy status.

## Pursued Carbon Neutral Energy Sources

Compared to the nation as a whole, the electric power generation mix in the Pacific Northwest has a lower direct greenhouse gas impact, due to the prevalence of hydroelectric power. King County government sources its power from Seattle City Light (SCL), Puget Sound Energy (PSE), and Snohomish Public Utility District (SnoPUD). SCL's power is over 90 percent hydro. In addition, SCL purchases carbon offsets ensure carbon neutral power is delivered to all customers.



County  
Operations

In 2019, King County began sourcing PSE's Green Direct power, which is a 100 percent wind/solar resource. This significantly reduced the County's operational GHG footprint. The County also purchases some electricity from SnoPUD, primarily for the Brightwater wastewater treatment facility. As of 2020, King County began purchasing renewable power for a small percentage of SnoPUD power from carbon sources.

Moving forward, the County will closely examine the quality of the electricity resources it purchases. Carbon-free electricity is not an end point and does not equate to the lowest environmental impact. Onsite generation of solar power at a facility reduces power distribution and transmission losses, making it the highest priority for power needs, subsequent to reducing use through energy efficiency. For utility power purchases, greater consideration needs to be given to the embodied energy of renewable and carbon-free generation infrastructure, as well as other non-carbon habitat and environmental impacts. In addition, some studies have indicated that reservoirs behind hydroelectric dams may generate significant GHG emissions. The County's current status of carbon-free power will continue to be evaluated to better understand ongoing and life cycle GHG emissions and environmental impacts associated with hydroelectric, nuclear, solar and wind generation.



## Focus Area 4: Green Building



### Provided Green Building Education for Unincorporated Area Customers

The King County Permitting Division provides a [Green Building Handbook](#) and a [Solar Smart](#) handout. Both resources encourage unincorporated area customers to make green building decisions which will help to save energy and reduce costs.

The Solar Smart handout also provides comprehensive information on how and where to apply for federal, state, and Puget Sound Energy incentives when installing a solar energy system in unincorporated King County. This resource also highlights common codes to be aware of and how to apply for a permit with the Permitting Division, when necessary. This document helped King County achieve the Solsmart Silver Designation in 2019 in recognition of a jurisdiction that has removed barriers to the installation of solar.



Countywide

### Grew the Construction and Demolition Debris Diversion Program

King County provides the tools and assistance needed to help obtain the highest diversion rates possible on construction, demolition, and deconstruction projects. Tools available include jobsite waste guidelines, waste management plan and report templates, sample waste recycling specifications, directory of local construction waste recyclers, and more. Available assistance includes presentations to jobsite workers on building material reuse, salvage, and recycling; site visits to assess diversion options; and research on recycling options for hard to recycle commodities.



Countywide

### Participated in Regional Code Collaboration and Partnerships with King County Jurisdictions

The Solid Waste Division's GreenTools Program provides support and resources to jurisdictions within King County through the Regional Code Collaboration (RCC), resulting in the ability for all jurisdictions to engage in conversations and actions associated with green building when they may not otherwise have the capacity to do so. The RCC facilitates peer-to-peer discussions, code development, trainings, tool development, and technical support. These efforts continue to strengthen regional relationships, allowing jurisdictions to work on solutions to common green building challenges. The RCC has been successful at developing codes promoting green building that are available for any jurisdiction to adopt, including strong 2015 Energy Code amendments, multifamily recycling, increased use of salvaged lumber, and a Living Building Challenge Demonstration Ordinance.



Countywide

### Supported Third Party Development and Green Building Programs

King County supports diverse third-party green building certification programs in order to increase the number of green buildings, help build regional capacity to implement green building programs, and to support verification of the health and environmental benefits of these programs. Promotion and support is delivered in the form of technical assistance to and in partnership with community forums, conference participation, code development, training development, pilot projects, and research and sponsorships of programming. These programs and certifications include LEED, Built Green, the Living Building Challenge, Evergreen Sustainable Development Standard (ESDS), Salmon Safe, Sustainable Sites Initiative, and Envision; in partnership with the Master Builders Association, Cascadia Green Building Council, International Living Future Institute, WA State Department of Commerce, and the Northwest EcoBuilding Guild.



Countywide

## Updated C&D Recycling Requirements

The King County Solid Waste Division provided education on a 2016 C&D Ordinance which required the designation of C&D processing facilities and transfer stations and banned readily recyclable C&D materials from the landfill.



## Proposed Strong Green Building Codes

King County was successful in researching and developing codes such as solar readiness, energy efficiency, a demonstration ordinance for Living Building Challenge certification called for through the 2015 SCAP but was unable to complete this process due to lack of resources. In 2020, King County will hire one FTE to help complete the tasks of both the 2015 and 2020 SCAP.



## Supported Green Building in Affordable Housing

King County provides financial assistance for affordable housing and community infrastructure through grants provided by both the Department of Community and Human Services (DCHS) and the King County Community Development Program. DCHS awards can be tied to green building requirements for dwelling units meeting King County's Green Building Ordinance, resulting in equitable access to healthier homes serving seniors, people with disabilities, homeless young adults, veterans, and chronically homeless people.



DCHS awarded \$500,000 to Willowcrest Townhomes from the Transit Oriented Development fund, which promotes housing development in proximity to high-capacity public transit services. Executive Constantine described Willowcrest Townhomes as a "leading example" of how it is possible to achieve equity, mobility, and sustainability goals while creating new housing. The King County Community Development Program supports sustainable development in the projects it funds, such as replacing inadequate sidewalks in neighborhoods, rehabilitating deteriorated buildings, and replacing crumbling water lines. Results included increasing walkability and encouraging climate-friendly forms of transportation, extending the building life, preserving embodied energy, and saving water. These investments serve underrepresented populations and reduce countywide emissions.

## Continued Implementation of Green Building Ordinance

King County capital projects continue to improve on implementing green building and sustainable development practices. Project highlights – Georgetown Wet Weather Treatment Station - Envision Platinum; Foothills Trail - Salmon Safe; LOOP Facility - LEED Platinum; and Passenger Only Ferry Terminal - Sustainable Infrastructure Scorecard Platinum. In 2019, 82 percent of completed projects achieved Platinum level using the King County Sustainable Infrastructure Scorecard or LEED rating system.



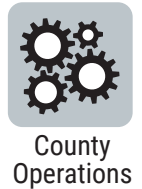
## Added Equity and Social Justice Requirements for Capital Projects

King County required incorporation of equity and social justice (ESJ) considerations in all County-owned capital projects through the [Sustainable Infrastructure Scorecard](#), which all capital projects are required to complete. The County has developed nine ESJ credits that are applied through the Scorecard. These include: 1) Develop project specific equity and social justice plan; 2) Partner and collaborate with Stakeholders partnering and collaboration; 3) Assemble diverse project team; 4) Conduct Equity Impact Review; 5) Site design and construct to counter know disparities; 6) Realize pro-equity elements of ESJ Plan; 7) Advance economic justice; 8) Pro-equity sourcing; and 9) Innovations. These strategies foster opportunities for capacity building, job creation, SCS/WMBE contracting, entrepreneurship and apprenticeships for frontline communities.



## Surpassed Zero Energy and Living Building Challenge Project Commitment

The K4C committed to a target of all new construction to be carbon neutral by 2030; the same target was included in the 2015 SCAP Green Building Operations section for County-owned facilities and infrastructure. As a pilot approach to meet this target, the 2015 SCAP Green Building Operations section included a Priority Action of committing 10 ZE/LBC projects by 2020. The County is exceeding its 2020 commitment.



As of early 2020, the County currently has 11 projects officially registered for ZE/LBC certification from five different divisions. The Parks Division's North Utility Maintenance Shop was the County's first project to achieve Zero Energy Certification in 2019. ZE and LBC are administered by the International Living Future Institute, located in Seattle, and are the world's most progressive green building rating system. At the time of the 2015 SCAP, ZE and LBC were the only third-party verified green building certifications that had a carbon neutral performance metric. Other jurisdictions are seeing King County as an example in the building industry, particularly for applying carbon neutral performance measures to public works and infrastructure type projects. King County's project portfolio includes several different divisions and lines of business, which can further influence parks, transit, wastewater, solid waste, affordable housing, and airport industries. The Parks North Utility Maintenance Shop is Zero Energy Certified and has an energy consumption load of 34,110 kWh/year and renewable energy production of 45,030 kWh/year. That is a GHG emissions savings of 21.8 MTCO<sub>2</sub>e/year and 1,088 MTCO<sub>2</sub>e over 50 years.

## Focus Area 5: Consumption and Materials Management



### Adopted Comprehensive Solid Waste Management Plan

King County's 2019 Comprehensive Solid Waste Management Plan was adopted in 2019. With this plan, the County and its 37 partner cities embarked on shared goals to increase regional recycling, expand services and modernize facilities, and identify options for waste disposal after the Cedar Hills Regional Landfill reaches capacity. The plan preserves King County's ability to manage its solid waste locally at the lowest cost with the least environmental impact by extending the life of the landfill past the mid-2020s. The newly adopted plan is also sparking larger conversations about the regional actions needed to reach King County's goal of Zero Waste of Resources by 2030, and how to lay the groundwork for a modern, environmentally responsible waste management system that will take the region through the mid-21st century.



### Adopted Responsible Recycling Task Force Recommendations

The Responsible Recycling Task Force (RRTF) unanimously agreed a set of recommendations to create a regional responsible recycling system for the future. The system takes into consideration the environmental and societal impacts of choices for recycling the materials generated here in King County. King County agencies, partner Cities, and the City of Seattle have worked to implement the recommendations – focusing on plastic and paper recycling, increasing demand for recyclable materials and conducting research extended producer responsibility (EPR) for Washington State, including an EPR Policy Framework and Implementation Model for Washington State.



### Increased Curbside Recycling Rates by 15 percent

King County's Solid Waste Division is responsible for ensuring curbside recycling services are provided in the unincorporated areas and providing regional education and outreach to support curbside recycling efforts throughout the county (except for the City of Seattle). In 2019, 316,308 tons of recyclable materials were collected by private hauling companies at the curb, and the single and multi-family recycling rate in unincorporated King County increased from 43.9 percent in 2013 to 50.5 percent in 2019, a 15 percent increase. The region had committed to reach a 70 percent recycling rate by 2020, but this has not been met due to the length of time it took to develop the Comprehensive Solid Waste Management Plan.



### Developed Fix-It Program to Reduce Waste and Save Residents Money

Making efforts to prolong a product's life is key to keeping materials in circulation for longer and thereby reducing the demand for material extraction, as it preserves the current energy and materials in the products for longer. The King County [free community repair events program](#) held 65 repair events all over King County, fixing items from lamps to chairs to clothing. When items are repaired and kept in use longer, it reduces demand on the natural environment's finite resources and helps families save money.



### Implemented 'Food: Too Good to Waste' Program

The average single-family household in King County throws away 150-270 pounds of edible food each year. Due in part to the high GHG emissions impact and waste of natural resources from food production, the County's Food: Too Good to Waste program has developed effective food waste prevention messaging, strategies and award-winning online outreach for residential audiences. In addition, the program has developed outreach materials in four languages besides English. King County has awarded eight commercial food waste grants for projects that aim to reduce edible and/or non-edible food waste generated by the commercial sector (non-residential) within King County (excluding Seattle). Food rescue has been a major focus of several of these grant projects.



### Led the King County Green Schools Program

The [Green Schools Program](#) helps K-12 schools and school districts learn about and improve conservation practices. As of March 2020, 14 districts and 320 schools benefited from program assistance, tools, and recognition. Program areas include waste reduction and recycling, energy and water conservation, healthy schools, and transportation. Food waste reduction, is a priority program focus, with technical assistance in [best practices](#) such as education, longer seated lunchtimes, recess before lunch, milk dispensers, food share tables, food rescue and collection of compostable materials. Many participating schools have food share tables and, from 2018 to 2019, 31 schools donated food to nonprofits. The potential to expand food donation is great.



### Invested in Recycling Infrastructure

The Solid Waste Division provides recycling collection at its transfer stations and collects various types of recyclable materials from self-haul customers with cardboard, metal, yard waste, and wood accounting for roughly 90 percent of recyclable tons collected. Newer stations can collect more types of recyclable materials. The most recent station to be completed, the Factoria Recycling and Transfer Station, opened in late 2017.



## Banned Construction and Demolition Materials from King County Waste System to Increase Recycling

King County does not accept construction and demolition waste at its transfer stations or Cedar Hills Regional landfill, except for incidental amounts. King County Code (KCC 10.30), requires that construction and demolition waste must be taken to a designated privately-operated construction and demolition debris recycling and/ or transfer facility. These facilities are banned from landfilling certain materials including clean wood, cardboard, metal, gypsum scrap, and asphalt paving, bricks and concrete. As markets develop, King County will consider banning other construction and demolition materials.



Countywide

## Implemented 'Sort It Out' Program

To cut waste and reduce the amount of recyclable materials in the landfill, the King County Sort It Out program was implemented in 2018. The program asks self-haul transfer station and drop box customers to place selected materials in designated areas at facilities that accept those materials for recycling. The program doubled the growth in transfer station recycling tons in 2018 over 2017.



Countywide

## Provided Recycling and Waste Disposal Discount to Low-Income Residents through 'Cleanup LIFT'

King County's new Cleanup LIFT discount enables 300,000 low-income residents to save money at County-operated recycling and garbage transfer stations. Eligible King County residents who show their Provider One, EBT, or ORCA LIFT card can receive \$12 off the cost to dispose of recyclables, yard waste, and garbage.



Countywide

## Committed to Improving Internal Waste Prevention and Recycling

Many King County agencies are undertaking impressive waste diversion efforts, such as the surplus and reuse programs within Metro, Fleet and Roads, which reuse over 5,000 items each year and recycle specialized materials. While these programs are successful, a 2018 waste audit of one of King County's facilities uncovered inconsistencies in waste prevention and recycling. This study discovered the facility had an overall low waste diversion rate, with very little waste being recycled or composted, only 13 percent. Based on these findings, there is a high likelihood of similar low diversion rates and high levels of contamination at other county facilities.



County Operations

Overall, the waste management collection systems within King County building operations lack consistency across facilities, and not all County-owned facilities are equipped to collect all types of recyclable materials. According to the audit, standardizing waste management systems across facilities—including containers, signage, and procedures for disposal—would improve diversion rates for operations for a low investment which will be a focus of 2020 and beyond.

## Purchased 100 Percent Recycled Content Copy Paper

In addition to reduced copy paper consumption goals, the 2015 SCAP strengthened the commitment to the purchase of 100 percent recycled content paper. The County established a contract in 2016 requiring the purchase of 100 percent recycled content, which achieved better prices and better compliance of 97 percent. Currently, a few agencies are buying a tree free paper made from sugarcane waste. This market is just being developed, but the current product boasts climate neutrality by turning a waste product into copy paper and may be another way to meet the County's climate goals.



County Operations



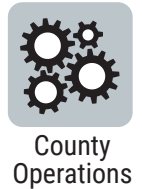
## Invested in More Efficient Computer Technology

In the 2015 SCAP, the County committed to converting 70 percent of individual servers to Standard Virtual Environments (SVEs). By 2019, it had converted 90 percent of individual servers to SVEs and 95 percent of backups go to the cloud. In addition, 72 percent of all County computers are now laptops which are more energy efficient than desktops, saving approximately \$63,000 in cost in 2019 and filling business needs of employees who telecommute.



## Updated the County's Sustainable Purchasing Policies and Program

Executing a priority action in the 2015 SCAP, King County updated its Environmentally Preferable Product Procurement Ordinance and Executive Policy in 2018 to the Sustainable Purchasing Ordinance (KCC 18.20) and Sustainable Purchasing Executive Policy (CON-7-22-EP). These policies redefine “sustainable” as more than just environmental, by also incorporating social and fiscal concerns into purchasing decisions made by King County employees. They also clarify agency responsibilities and use ecolabels and environmental certifications as minimum requirements. These align the County's purchasing with other relevant policies, including the Green Building Ordinance and Equity & Social Justice initiative.



## Focus Area 6: Forests and Agriculture



### Tripled Open Space Conservation Funding

With new financial tools in place in 2019, King County tripled the amount of open space conservation funding awarded annually through the Conservation Futures Tax program and King County Parks Levy. From 2016 and 2019, King County protected more than 3,100 acres across all land categories through fees and easements (total does not include lands protected by cities in the County).



### Registered over 265,000 Acres in Open Space Taxation Programs

Approximately 235,500 acres of privately-owned forest land and 30,000 acres of farmland have been enrolled in one of the County's open space taxation programs. The King County Public Benefit Rating System (PBRs) and Current Use Taxation (CUT) programs provide significant tax savings incentives to landowners who chose to protect farmland, forestland and other important classes of open space.



### Protected over 200,000 Acres of Private Forest Land

King County has protected more than 200,000 acres of private forest land by acquiring conservation easements and removing development rights, which will ensure that those lands remain forested. Similarly, nearly 15,400 of productive farmland has been preserved through the County's Farmland Preservation Program (FPP). Between 2016 and 2019, an average of 253 acres of farmland have been permanently preserved by acquiring conservation easements through FPP. There are an additional 500 acres proposed for FPP inclusion in 2020, all of which are Land Conservation Initiative priorities.



## Addressed Disparities in Park and Open Space Distribution and Access

The Land Conservation Initiative includes tools to help address disparities in park and open space distribution and access. This work was advanced by the Open Space Equity Cabinet, which revised CFT Code Chapter 26.12 to support more equitable outcomes, mapped King County areas lacking equitable access to parks, open space and farmland, waived CFT match requirements for qualified grant applicants addressing open space disparities, and developed a community engagement action plan to expand, engage, and diversify the cities and non-profits awarded CFT funds.



King County awarded match-free CFT funds for eight applications in 2019 and began implementing the community engagement plan late that year. King County's Open Space Program also completed three acquisitions in White Center and Skyway, two unincorporated areas with open space inequities. The County's agricultural program also received funding to acquire additional farmland in south County, which could serve as a cornerstone for a collaborative farming venture by immigrant/refugee farming communities in that area.

## Added 3,100 Acres of Land Dedicated to Local Food Production

Launched in 2014, King County's Local Food Initiative (LFI) is taking bold steps to support the local food economy, including to (1) better connect local farms to consumers, (2) increase access to healthy, affordable foods in underserved areas, (3) support farmers and protect farmland, and (4) create a sustainable farm-to-plate pipeline more resilient to the effects of climate change. The Food System Data Center maintains current metrics about individual LFI measures.



The 2015 SCAP included a goal, initially proposed by LFI, to increase King County acreage dedicated to food production by an average of 400 acres per year. Because small-scale annual changes in land use are often difficult to track, the Water and Land Resources Division conducted a comprehensive agricultural land use survey in 2017. A total of 48,200 acres were classified as agricultural land, of which 25,100 acres were actively farmed for food production. The 2017 food production estimate represented an increase of 3,100 acres compared to 2013, and most of that increase was attributable to fallow/idle farmland being returned to production.

## Supported Local Farmers

The Water and Land Resources Division's Agriculture Program works with King Conservation District (KCD), Washington State University (WSU) Extension, and other partners to provide technical assistance, support for farm plan development, and cost sharing to support sustainable farming practices and to promote local food production. King County manages a comprehensive website ("one stop shop") for business, farmland access, production, marketing and food safety.



During the Covid-19 crisis, the County expanded the website to include information from agency and NGO partners related to available financial resources, health directives, expanded market opportunities, and options for consumers. The County also offers property tax incentives that support privately owned farms.

## Increased Land Access for Local Farmers

Beginning and resource-challenged farmers face numerous barriers related to accessing suitable farmland. King County and partner organizations continue to build a comprehensive farmer training and land access program that includes NGO-sponsored training farms, WSU Extension and KCD technical training and the multi-partner Working Farmland Partnership, which is focused on matching landowners with farmers looking for land.



DNRP also owns and manages a portfolio of farm properties that are leased to farmers from traditionally underserved communities and farmer training organizations. Those County-owned farms provide an opportunity for new and beginning farmers to establish or expand their farming businesses with the goal of eventually locating on private owned or leased land. County farms will also be used as platforms to demonstrate climate friendly forestry practices, including the use of recycled water and compost.

### **Launched a Nation-Leading Forest Carbon Program**

In 2019, King County launched a Forest Carbon Program, one of the first of its kind in the nation. King County produces carbon credits by permanently protecting threatened forests and tree canopy through efforts like the Land Conservation Initiative and partnerships with private forest landowners.



Countywide

Revenue generated from the program will be invested in new County acquisitions, targeting lands that are among the most critical conservation priorities of the region, and will provide financial incentive to private forest landowners, cities and NGOs who protect and manage forest land. Ultimately, King County supports expansion of the programs beyond King County, which would require transitioning program management responsibility to an NGO or state agency.

### **Led Forest Stewardship Initiatives with Local Partners**

The Water and Land Resources Division's Forestry Program works closely with KCD and WSU Forestry Extension to promote healthy forests and forest stewardship through forest stewardship planning courses and workshops and on-site forest management assistance to non-industrial private forest landowners. The Forestry Program also works with KCD, fire districts and local communities to reduce the risk of wildfire and to ensure communities are prepared to respond should they be threatened by wildfire. The County also offers property tax incentives to encourage private forest landowners to preserve and enhance management of their forestlands and assists landowners to take advantage of the Transfer of Development Rights program.



Countywide

### **Grew Loop® Biosolids Program to Improve Soil Quality and Offset Carbon**

The Wastewater Treatment Division uses its soil amendment Loop® biosolids on private and state-managed forests in King County to increase tree growth, store carbon in forest soils, and replace use of fossil fuel-based fertilizers. The Wastewater Treatment Division is pursuing opportunities to increase use of Loop® biosolids within King County, thereby improving the local ecosystem and reducing GHG emissions associated with transportation of the material beyond county limits.



Countywide

### **Planted More than One Million Trees**

The 2015 SCAP called for planting one million new native trees with partners by 2020 as a "down payment" on the 30-Year Forest Plan. Restoration projects that plant native trees and shrubs on previously cleared, non-agricultural land have multiple benefits, including wildlife habitat, reduced stream temperatures due to increased shade, and increased carbon sequestration. King County significantly expanded tree planting efforts since 2015, and combined with partners to plant more than 1.2 million trees (King County and partners each planted approximately half of that total). Launched the Development of a 30-Year Forest Plan



Countywide

By the end of 2020, King County will complete a 30-Year Forest Plan to maximize forest health and tree cover in both urban and rural King County. This plan will accommodate population and economic growth and meet the goals and needs for local food production and working forests. To date, County staff have initiated work with cities, community-based organizations, and other partners to develop the plan. The plan will include methods to track progress, monitor tree survival, achieve multiple benefits, and coordinate extensive public outreach and engagement on the initiative.

### **Prioritized Forest Management Projects and Investments for County-Owned Lands**

King County recently updated analyses to identify high-priority areas for future forest restoration projects. The analysis identified 1,900 acres of County-owned property most in need of active management to improve ecological health and climate resilience. This analysis, combined with Forest Stewardship Plans that provide recommendations for stewardship activities at a particular property, will help prioritize and maximize King County's climate-related stewardship efforts and investments.



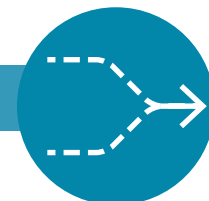
## **Preparing for Climate Change**

The 2015 SCAP included 19 climate preparedness actions aimed at reducing climate change impacts on King County operations and core functions, such as flood risk reduction, stormwater management, public health, and emergency management. The actions focused on three major areas of work: increasing infrastructure, community, and ecosystem resilience; strengthening regional partnerships; and enhancing technical understanding of climate change impacts on the County. Sections 1.1.1 through 1.1.3 summarize the accomplishments made to date in these focus areas; Section 1.1.4 summarizes the remaining preparedness actions to be completed from the 2015 SCAP. Work on all of the 2015 SCAP actions will conclude by December 2020.

The 2015 SCAP also recommended creating a climate change preparedness staff position to support preparedness activities across and within King County departments, and to develop strategic partnerships with other local governments, universities, and nonprofit organizations. A Climate Preparedness Specialist position was created by King County's Climate Leadership Team in 2016 to address this need. The Climate Preparedness Specialist works closely with other members of King County's Climate Action Team, County departments, and external partners to help ensure that we are effectively delivering on SCAP goals and priority actions.

*Note: reported activities and accomplishments in this appendix were organized to align as closely as possible with the 2020 focus areas. Because this is not the original framework in which the activities were developed, some focus areas do not have specific activities highlighted (e.g., Focus Area 5).*

### **Focus Area 1: Mainstream Climate Preparedness**



#### **Increased Infrastructure, Community, and Ecosystem Resilience**

King County invests millions of dollars annually in public infrastructure improvements and delivery of local services, including wastewater conveyance and treatment, public transit, stormwater management, maintenance of roads and bridges, floodplain management, habitat restoration, public health services, management of parks and open spaces, and land use planning. These investments are critical to

supporting a thriving economy, healthy neighborhoods, and a clean environment.

Accounting for current and future climate impacts when making those investments is essential to building resilient infrastructure, communities, and ecosystems given the lasting nature of those decisions. Key areas related to this in the 2015 SCAP included:

- Preparing for sea level rise.
- Strengthening connection between climate preparedness and hazard mitigation.
- Increasing understanding of connections between public health and climate change.
- Addressing climate change impacts on summer water supply and streamflow.
- Planning for salmon recovery in a changing climate.

### **Prepared for Sea Level Rise**

Sea level rise can cause damage to public and private infrastructure, create health and safety hazards, reduce public access to beaches, and negatively impact our shoreline ecosystem in ways that reduce the likelihood of improving salmon recovery. As part of a 2015 SCAP commitment to develop a more comprehensive approach to sea level rise, the County worked across departments to accomplish the following:

- Updated local land use codes for Vashon and Maury islands to reduce the risks of sea level rise to shoreline development. The adopted changes include creation of a Sea Level Rise Risk Area landward of the existing coastal high hazard area and increased setback requirements for development on coastal bluffs.
- Identified King County-owned assets vulnerable to up to five feet of sea level rise. Asset owners are developing adaptation plans for addressing those impacts. A summary of this work will be available by the end of 2020.

### **Strengthened the Connection Between Preparedness and Hazard Mitigation**

Climate change exacerbates existing challenges with flooding, landslides, wildfire, and other natural hazards by changing the frequency, intensity, and duration of these events. Strengthening the connection between climate preparedness and hazard mitigation creates opportunities to leverage existing hazard mitigation investments to address projected risks and today's risks. These efforts were part of the 2015 SCAP:

- The Water and Land Resources Division updated King County's landslide hazard mapping along major river corridors and made those maps available on King County's website, providing property owners, local governments, and agencies with an updated resource for evaluating landslide hazard risks in King County.
- The Office of Emergency Management (OEM) incorporated climate change impacts into the hazard profiles and evaluation criteria for the 2020 update of the County's Regional Hazard Mitigation Plan. The OEM also incorporated information on climate change impacts into community presentation materials and related public outreach materials, and hosted a facilitated discussion with stakeholders to evaluate preparedness and response capabilities for heat-related impacts (including wildfire smoke).

It is also important to note that OEM adopted King County's 14 Determinates of Equity as goals for the 2020 Regional Hazard Mitigation Plan and a basis for targeting investments.



## **Addressed Climate Change Impacts on Water Supply and Streamflow**

Projected decreases in snowpack and summer streamflow will exacerbate challenges across the region related to managing summer water supplies for people and fish. As part of the 2015 SCAP, King County actively participated in regional forums focused on streamflow management to help ensure that water management decisions account for the County's water needs for instream flows and agriculture. This included discussions hosted by the U.S. Army Corps of Engineers (for the Green River), the Cedar River Instream Flow Commission, and the Central Puget Sound Water Supply Forum.

King County also expanded recycled water use to serve two of the three largest irrigators in the Sammamish Valley. As a result of the Recycled Water Program's partnership with the Salmon Safe certification program, Willows Run golf course in Redmond (a recycled water user) was certified as a Salmon Safe golf course in 2016. The Buttonwood Tree Farm was also added as a new recycled water customer in 2017.

## **Planned for Salmon Recovery in a Changing Climate**

Climate change impacts on salmon include changes in freshwater conditions that reduce the likelihood that salmon will reach adulthood and successfully spawn in natal streams. The County's Climate Action Team partnered with watershed-based salmon recovery teams and other technical experts to develop climate change and salmon issue papers for each of the four Water Resource Inventory Areas (WRIAs) in King County. The issue papers provide an overview of how climate change is likely to affect salmon and salmon habitat in each WRIA and identify proposed actions to address climate impacts. Information from the issue papers has been incorporated into salmon recovery and habitat restoration activities in King County, including salmon habitat plans and salmon recovery work plans. The information is also supporting grant applications.

### **Focus Area 2: Technical Capacity**



## **Enhanced Technical Understanding of Climate Change Impacts on King County**

Investing in research and technical assessments specific to King County's decision-making needs helps ensure that we are using best available science to guide our preparedness efforts. A major research focus in the 2015 SCAP was developing a better understanding of how heavy rain events may change as a result of rising greenhouse gas emissions and how those changes may affect King County operations. Research related to the potential for climate change-driven migration to the Puget Sound region was also supported. Increasing technical understanding of climate change impacts on King County continues to be a priority for the 2020 SCAP.

## **Increased Capacity to Address the Risks Associated with Extreme Precipitation**

Climate change scenarios for the Puget Sound region project increasing winter rainfall and more intense heavy rain events. These changes have implications for wastewater conveyance, stormwater management, and floodplain management, including decisions about infrastructure sizing and development requirements. The following efforts were part of the 2015 SCAP:

- The Wastewater Treatment Division and the Water and Land Resources Division leveraged grant funding from the Washington State Department of Ecology to develop hourly rainfall projections for King County through the 2080s using two regional climate models. The analysis, conducted in partnership with the University of Washington (UW) Climate Impacts Group, was expanded in 2018 to 12 regional climate model projections to provide a more robust set of scenarios for decision-making. The expanded analysis found potentially large increases in rainfall intensity across a range of locations and intensity metrics.

- Stormwater Services conducted a preliminary assessment of climate change impacts on stormwater infrastructure based on changes in rainfall from two regional climate model scenarios. That research suggests that stormwater infrastructure will need to be larger to account for increasing rainfall, although additional analysis using the expanded set of regional climate model scenarios is needed before making recommendations for changes in design standards.
- The River and Floodplain Management Section partnered with the UW Climate Impacts Group to conduct a preliminary assessment of climate change impacts of flooding on the Snoqualmie and Green rivers. The research provided compelling evidence of increased future flood flows in the South Fork Skykomish River, the Snoqualmie River and its tributaries, the Green River above Howard Hanson Dam, and major tributaries to the Green River. Additional analysis using the expanded set of regional climate model scenarios is currently underway.

### **Assessed Climate Change Impacts on Population Growth Rates**

As climate change impacts become more pronounced regionally, nationally, and globally, the potential for population displacement and climate change-driven migration increases. In response to growing questions about impacts on population growth assumptions in the Puget Sound region, Water and Land Resources Division partnered with Portland State University, the UW Climate Impacts Group, and other institutions to host a 2016 symposium exploring the potential for climate change-driven migration to the Northwest and its implications for long-range planning.

The symposium concluded that the potential for climate change-related population growth in the Northwest cannot be ruled out, although it would be premature to make changes to current population forecasting models. Additional work is needed to identify the additional data, information, methodologies, and modeling needed to systematically assess the question of climate change-driven migration. King County is continuing to track research on this issue and any implications for long-range planning.

## **Focus Area 3: Health and Equity**



### **Increased Understanding of Connections Between Public Health and Climate Change**

More intense summer heat events, wildfire smoke, more harmful algal blooms, and increased flooding are some of the many ways that climate change can directly and indirectly affect personal and community health and well-being. As part of the 2015 SCAP, Public Health— Seattle & King County (Public Health) leveraged grant funding and other financial and technical assistance to:

- survey and engage stakeholders on health and climate change, determining that County staff and community members have a high level of concern over climate change and a strong interest in more information on health impacts;
- develop the agency's first [Blueprint for Addressing Climate Change and Health](#) to guide Public Health action on climate change, including 2020 SCAP actions for Public Health; and
- produce two climate change and health public education comics, one focused on extreme heat events and one on the connection of climate change to health impacts.

Additionally, Public Health hosted four cross-departmental workshops with County staff to identify connections between climate change, public health, and County programs.



### Strengthened Regional Partnerships

Climate change impacts are not bound by jurisdictional lines and affect complex and inter-connected natural, socio-economic, and regulatory systems, underscoring the importance of working with regional partners on climate preparedness. Many of the 2015 SCAP preparedness actions summarized in the Focus Area 1 (Mainstream Climate Preparedness) portion of this section built on existing partnerships with local and tribal governments and the climate research community to support implementation of specific actions. However, looking beyond partnerships based on individual actions to broader regional collaboration on climate preparedness is also important. Regional collaboration can leverage limited resources and staff capacity, reduce duplication of efforts, facilitate institutional learning, catalyze action at broader regional scales, and ensure that neighboring climate preparedness efforts complement each other.

Recognizing the potential opportunities in developing a stronger regional dialogue around climate preparedness, the 2015 SCAP included a priority action calling on King County to work with the Puget Sound Regional Council (PSRC), neighboring counties and cities in central Puget Sound, nonprofit organizations, and businesses to scope and establish a regional climate preparedness partnership.

The Puget Sound Climate Preparedness Collaborative (Collaborative) was launched in October 2017, with King County as a co-chair, to enhance coordination and improve the outcomes of climate change preparedness efforts in the Puget Sound region. Collaborative preparedness activities to date include the following:

- connected with approximately 275 practitioners in convenings related to climate change impacts on stormwater management, shoreline planning, and wildfire west of the Cascades;
- partnered with the Washington Department of Natural Resources in its efforts to develop a statewide climate resilience plan;
- developed a strategic plan articulating the mission, services, and near-term priorities for the Collaborative; and
- played a key role in the development of a white paper and ongoing research related to managing western Washington wildfire risk in a changing climate.

The Collaborative currently includes 21 member organizations and partners representing five counties of the Puget Sound region, three municipalities, the Port of Seattle and Northwest Seaport Alliance, PSRC, Sound Transit, the Puget Sound Partnership, two conservation districts, and a growing number of tribal governments.

The Institute for Sustainable Communities, the Kresge Foundation, and the Bullitt Foundation currently provide support for the Collaborative. Expanding the Collaborative and pursuing additional opportunities to strengthen regional partnerships in King County and the Puget Sound region will continue to be priorities for the 2020 SCAP.

## Remaining and Unfinished Preparedness Actions from the 2015

The year 2020 marks the fifth and final year of the 2015 SCAP. Although most of the 2015 climate preparedness actions are complete, three are still underway or planned for completion in 2020:

- **Plan for sea level rise.** King County staff are developing adaptation strategies for County-owned assets potentially affected by sea level rise and synthesizing results into a final report. Additionally, the County's Climate Action Team will partner with the Water and Land Resources Division to convene a discussion with shoreline jurisdictions in the County to identify opportunities for coordinating future work on planning for sea level rise.
- **Assess impacts of heavier rain events on wastewater conveyance and treatment.** The Wastewater Treatment Division is currently modeling the impacts of heavier rain events on wastewater conveyance and treatment using updated precipitation projections produced for King County as part of the 2015 SCAP. Results from the study will be incorporated into future updates of the Regional Wastewater Services Plan and the King County Combined Sewer Overflow Control Plan. The results will also be used to help inform long-term investment decisions that will be made under the Clean Water Plan.

One 2015 SCAP action, "Expand and fund public health preparedness and resources," will not be completed because of lack of funding. Although Public Health leveraged grant funding to develop the [Blueprint for Addressing Climate Change and Health](#), a lack of dedicated funding for climate work in the department has made it difficult to implement Blueprint recommendations and sustain ongoing work related to climate change and health. Addressing funding and building capacity within Public Health related to climate change health is a focus area in the 2020 SCAP.

# Appendix V: Operational Energy and GHG Guidance

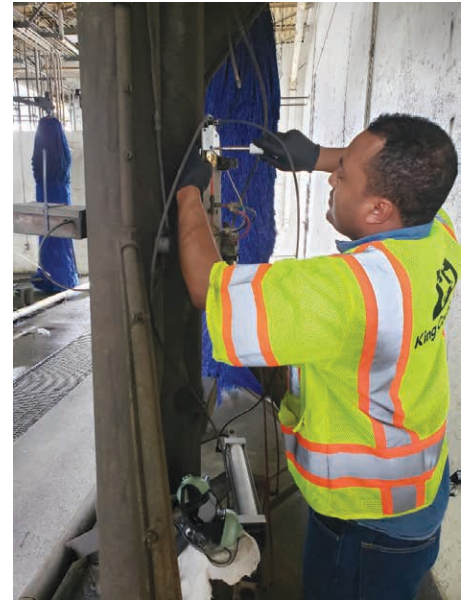
*This appendix provides specific guidance in support of the goals included in the Buildings and Facilities Energy Focus Area of the Reducing Greenhouse Gas Emissions Section. The specific strategies and policies provided in this appendix are a roadmap of actions that guide County government agencies to advance their energy reduction and renewable energy generation efforts. This appendix focuses on energy work related to County facility energy use.*

## Operational Energy Guidance Strategies

### Strategy APX 1. Energy Reduction Action Plans

All County agencies shall develop Energy Reduction Action Plans (ERAPs) by January 1, 2022, and at least once every five years thereafter. The ERAPs are intended to be energy-reduction identification and action documents, rather than extensive written documentation. The ERAPs shall detail key actions, implementation strategies, barriers, and methods for how each agency will contribute to the County's 2025 and 2030 energy reduction goals. At a minimum, and in addition to other relevant information, the ERAPs shall include:

- any completed facility assessments/audits;
- facility recommissioning plans;
- facility-by-facility documentation of fossil-fuel consuming equipment, including estimated end of operating life year and barriers to installing non-carbon replacement alternatives; and
- overall or facility-by-facility checklists of opportunities and planned investments and actions to reduce energy use through
  - LED lighting;
  - lighting controls;
  - heat pump or condensing hot water heater installations;
  - heat pump heating and air conditioning equipment; and
  - ventilation heat recovery and dedicated outside air systems



*Low-cost repairs and maintenance activities contribute to the County's energy reduction goals, such as repairs of air distribution system leaks (pictured) at the Ryerson Transit Base which led to over 130,000 kWh/year in energy savings.*

### Strategy APX 2. Resource Audits

By December 31, 2022, and every five years thereafter, any facility consuming 5,000 MMBTU annually (using 2020 data) shall complete an energy and water efficiency resource audit.

- The resource audits are to be used to guide future energy and water investments, and shall detail cost-effectiveness information for all identified behavioral and equipment retrofit efficiency actions in each impacted facility.
- Per King County Ordinance 16927, conduct a level II energy audit for facilities at which capital projects valued over \$250,000 are planned that impact any portion of the mechanical or lighting system, if such an audit has not been completed within the previous seven years.



### **Strategy APX 3. Energy Recommissioning**

No less frequently than every five years, King County will carry out an energy recommissioning of all facilities that use more than 5,000 MMBTU per year. Such recommissioning may include functional analysis of facility lighting, envelope, controls, heating/cooling equipment, operations, and historical consumption data to ensure each impacted facility is operating efficiently. In the case of new facilities or major renovations, recommissioning must occur within two years after the completion of construction.

Facilities that have reduced energy use by 5 percent or greater versus the previous comparison baseline (five years prior) do not need to perform such assessments, but can if the agency believes savings opportunities may be identified. Usage may be normalized for factors such as weather.

### **Strategy APX 4. Energy Investment Cost-Effectiveness**

While technology exists today to reduce the County's energy use by 50 percent or greater, it is essential to consider the cost effectiveness of projects to ensure the County expends its limited financial resources wisely.

- All capital and major maintenance projects shall install the most energy efficient equipment that is life cycle cost effective, calculated as compared to the existing equipment to be replaced or the incremental cost above the baseline code-meeting standard replacement equipment.
- County agencies shall evaluate and pursue the installation of solar panels at all facilities where life cycle cost effective over a 20-year product life.

By December 31, 2022, the Office of Performance Strategy and Budget, in coordination with the Energy Task Force and the Capital Project Management Working Group, shall develop criteria regarding if and when County agencies shall make investments to replace equipment for resource efficiency purposes, and when project managers and staff are expected to secure and expend additional dollars for capital projects.

### **Strategy APX 5. Capital Project Energy Performance**

In addition to meeting the County's requirements for the internal Sustainable Infrastructure Scorecard, Leadership in Energy and Environmental Design (LEED), or other green building requirements, all capital and major maintenance projects that trigger energy code requirements shall meet the prescriptive or modeled energy code requirements of the jurisdiction with the most energy-efficient energy code within the County, by following the County-developed energy code compliance checklist. As of 2020, the most efficient energy code is in the City of Seattle.

### **Strategy APX 6. Continued Investment in Electricity Energy Efficiency**

As of 2020, King County is sourcing carbon neutral electricity to power its buildings and facilities. County agencies shall "stay the course" and continue aggressive electricity reduction actions toward future energy reduction goals. Continued benefits of reducing electricity use include:

- reducing utility operating expenditures;
- lowering the County's energy use "frees up" the energy to be sold by the utilities to other customers, reducing the need to generate power from higher-carbon sources. For example, as of 2020, the majority of Puget Sound Energy's power systemwide is carbon-based and Seattle City Light's ability to sell its carbon neutral power to others reduces the need for others to generate power with natural gas;
- minimizing the need for new electricity generation construction. All new generation has significant environmental impacts, including manufacturing, land use, and habitat impacts. This includes renewable development such as hydro, solar, and wind generation; and
- supporting the innovation, engineering, and development of more efficient technologies from a global perspective.

### **Strategy APX 7. Fossil Fuel Elimination Strategy**

King County recognizes that the consumption of fossil fuel resources in its buildings and facilities, particularly those transported through pipelines, results in a direct and long-lasting increase of GHG emissions. The County consumes natural gas, oil, and propane at many of its facilities, some of which are designed such that replacement of such systems with non-fossil fuel equipment is feasible and practical, and some of which pose significant design and financial challenges to replace with electrically operated equipment. This strategy highlights and reinforces actions that support the elimination of fossil fuels that are already outlined in other areas of the SCAP.

- No fossil fuel combustion heating systems shall be used for new construction, except for backup generators, food service equipment, and specialized industrial equipment for which there are no electrically operated alternatives.
- All County agencies shall inventory equipment that operates on fossil fuels by January 1, 2022, including information about potential replacement equipment that can eliminate or significantly decrease fossil fuel use for each piece of equipment.

### **Strategy APX 8. On-Site Solar Generation**

Existing buildings over 2,500 square feet shall be assessed for solar generation potential by December 31, 2021. The County will pursue on-site solar generation for several reasons, including:

- to reduce ongoing utility bill operating costs;
- after maximizing efficiency, on-site power generation is generally the lowest-impact generation resource because of the elimination of long-distance power distribution line losses between power plants and end users, which typically range between 8 and 15 percent; and
- resiliency. The installation of solar, particularly with newer “islanding” technologies, will enable facilities with on-site solar to be designed to operate during daylight hours if the electricity grid is down.

For new construction, on-site solar generation shall be installed to meet the equivalent of the City of Seattle code requirements below.

- Construct all new buildings according to sections C411 and C412 of the 2018 City of Seattle code requirement of 0.25 watts of on-site solar photovoltaic power generation per conditioned square foot, or to any higher-level solar code that is established by a jurisdiction in King County.
- All new construction building projects shall evaluate solar system sizes beyond this standard, and install the largest-sized system that is life cycle cost-effective over a 20-year system life

### **Strategy APX 9. Design for Daily Shutdown**

New facilities shall be designed such that all non-critical energy using systems are shut off during unoccupied times, with simple override controls as necessary for afterhours access and safety. Outdoor lighting shall include controls such as motion sensors that will minimize and/or shut down lighting when no activity is present. Exceptions shall be rare and shall include a clear public or staff benefit, such as public or staff safety.

### **Strategy APX 10. Energy-Using Equipment Design Guidance**

Dictating the use of specific energy equipment technologies has the potential to limit creative design and potentially to create an unanticipated outcome of increased energy use, if newer technological advances do not fit the prescribed standards. However, advancing technological improvements are making some older or inefficient technologies obsolete or unattractive from a life cycle perspective. New construction and renovation projects shall meet the following minimum design requirements:

- All lighting fixtures shall have an efficacy of over 110 lumens per watt, unless replacing existing lighting results in an energy reduction of 50 percent or greater for each lamp replaced.

- No fossil fuel combustion heating systems shall be used for new construction
- Renovation projects shall replace heating equipment with a non-fossil fuel option. If such an option is not feasible, heating equipment shall be replaced with equipment that has a combustion efficiency of 86 percent or greater.
- Heat pumps shall have a Coefficient of Performance of at least 2.5, unless the total space to be heated with such equipment is under 400 square feet.
- Space to be conditioned shall be minimized and based on specific needs. Strong consideration shall be given to stairwells and other low-use spaces being constructed as outdoor and/or unconditioned space.
- All space heating devices shall be controlled with seven-day programmable wall thermostats that are not integrated into the device. This includes restrooms and all other conditioned spaces.
- Radiant heaters shall have timer or motion shutdown controls
- Heat recovery shall be integrated into all ventilated spaces over 5,000 square feet and shall have heat recovery of 70 percent or greater, where allowed by code.
- Agencies shall, as necessary, integrate wording into construction and procurement documents to ensure these strategies are followed.

### **Strategy APX 11. *Energy Star Appliances***

All appliance purchases by King County government shall be Energy Star qualified appliances, if an Energy Star rating is available for the type of appliance. Agencies shall set in place practices to ensure that credit card (i.e., P-card) purchases of equipment and appliances comply with this requirement. To ensure both safety and resource efficiency, employees are not allowed to bring, or accept donations of, heaters or other electrical appliances for use in County facilities, unless specifically approved by the county. When an energy-using device is deemed necessary for an employee's comfort or to perform his/her work, appliances will be purchased by County agencies and shall be Energy Star qualified, if an Energy Star category exists. The Procurement and Payables Section of the Department of Executive Services shall work to ensure compliance with this strategy.

### **Strategy APX 12. *Purchased Energy Use Cap for Capital Projects***

Replacement and/or upgrades of existing facilities and construction of new County facilities can result in an increase of total County energy use, offsetting some of the significant County government energy reductions that have been made in recent years.

Additional energy use compared to the existing facility, on a total BTU basis, can be consumed if the facility project meets one of the following criteria:

- reduces total net County energy use on a BTU basis (e.g., a transfer station trash compactor that measurably demonstrates the reduction of vehicle fuel consumption);
- pays for energy efficiency work equal to the additional energy use, on a BTU-for-BTU basis. Energy efficiency work will be done in other County facilities within the same division or Department;
- for facility replacement projects, as measured against the most recent 12 complete months of energy use on a BTU basis at the former facility, does not purchase additional power from an electricity or natural gas provider and/or generates any additional power beyond the cap through on-site solar, or through funding of other County-owned renewable energy generation;
- results in a significant level of service increase for the public that reduces normalized energy use, such as a new or expanded transit base or a wastewater pump station that has greater wastewater flow but reduced energy use per volume pumped; and/or
- meets regulatory requirements, such as wastewater de-nitrification.

After the first year of operation, remodeled or replaced facilities that exceed the calculated energy use cap shall pay for energy reduction projects that will provide an equal or greater reduction in energy use above the cap within that agency. New facilities are exempt from this requirement.

### **Strategy APX 13. Renewable Biogas Optimization**

By December 31, 2021, King County will set renewable energy generation targets and track progress toward such targets at the Cedar Hills Regional Landfill and at the Wastewater Treatment Division's Brightwater, South, and West Point treatment plants. These targets are to help optimize use of available biogas for the most beneficial uses. Two targets should be tracked for each facility: the percentage of total gas sent to beneficial end use versus the percentage sent to flares, and the utilization percentage of the energy content of the biogas toward beneficial uses, as measured by available input BTU versus BTU output.

### **Strategy APX 14. Energy Conservation Incentives**

All County agency energy-using equipment replacement projects shall maximize available utility rebate dollars by working with Puget Sound Energy, Seattle City Light, Snohomish PUD, Seattle Public Utilities, and other utility companies as appropriate. This action helps reduce project costs and supports such utility conservation incentive programs that have been a critical component of the region's long-term success as a national leader in resource efficiency efforts.

### **Strategy APX 15. Occupied Leased Facilities**

When consistent with the operational needs of the function, King County shall seek to lease facilities, for leases of employee-occupied space of longer than five years, which are certified through the LEED rating system level of silver or higher or are Energy Star Certified. Facilities that do not meet these standards can be leased by the County if plans and funding are in place at the time of signing that will enable a facility to meet this standard within 24 months of lease signing.

### **Strategy APX 16. Operational GHG Measurement Principles**

The following principles outline how King County will measure and report on operational GHG emissions towards the 80 percent by 2030 target adopted in this SCAP. King County develops annual GHG emissions inventories to inform action and measure progress toward adopted targets. King County's operational emissions are categorized into three "scopes":

- **Scope 1 emissions** include direct GHG emissions and removals that occur as a part of operations, including fuel combustion from King County-owned vehicles; natural gas used at King County facilities; landfill gas at Cedar Hill Regional landfill; and land use change, including carbon sequestered by forest growth on King County-owned lands.
- **Scope 2 emissions** include indirect emissions associated with the consumption of purchased electricity, steam, heating, and cooling.
- **Scope 3 emissions** include all other indirect sources of GHG emissions, such as King County employee business travel and commuting or the life cycle GHG emissions associated with the production, use, and disposal of purchased materials and services. Purchasing is the County's largest source of Scope 3 emissions.

For 2020 SCAP County operational targets, King County includes all Scope 1 and 2 emissions and removals, consistent with adopted protocols and best practices. This accounting aligns with the King County Carbon Neutral Implementation Plan, which expanded past County operational GHG target tracking that had previously focused only on emissions from energy and fuel use (e.g., 2017 SCAP Biennial Report).

Scope 3 emissions are not included in reporting on this target. However, King County is still working to quantify and reduce these emissions, for example, by addressing employee commute-related emissions through the County's Commute Trip Reduction program, enabling telework and telecommuting where feasible, and by addressing embodied emissions of construction materials like concrete used in County projects through new commitments in the Consumption and Materials Management Focus Area.

**Measuring toward agency net carbon neutral targets.** In addition to an overarching target to achieve an 80 percent reduction in Scope I and II operational GHG emissions, certain agencies in King County also have net carbon neutrality commitments. As a leadership approach, these agencies (Department of Natural Resources and Parks, Solid Waste Division, Wastewater Treatment Division) are accounting for Scope 3 emissions and also accounting for broader emissions reductions or removals that occur from their actions, such as those related to Loop® biosolids use, transfer station recycling, and renewable energy production.

### **Strategy APX 17. Operational GHG Emissions, Carbon Offset, and Renewable Energy Policy**

King County is a large renewable energy producer and seller, has established a Forest Carbon Program and has established internal carbon fees in the Facilities Management Division and Fleet Services Division. There are also more opportunities to develop and sell climate and energy related environmental attributes on the horizon – such as related to vehicle electrification and additional carbon sequestration strategies. The benefits this guidance includes are to:

- formalize and clarify priorities for GHG emissions reductions;
- outline the rationale for County sale of environmental attributes;
- provide dedicated funding to accelerate deeper, faster GHG emissions reductions and climate preparedness benefits; and
- ensure consistency of approaches across varying lines of business.

#### **APX 17.A. Guidance for Operational GHG Emissions Reductions**

Priorities for operational GHG emissions reductions. To achieve its operational emissions, energy, and fuel goals, King County prioritizes strategies that:

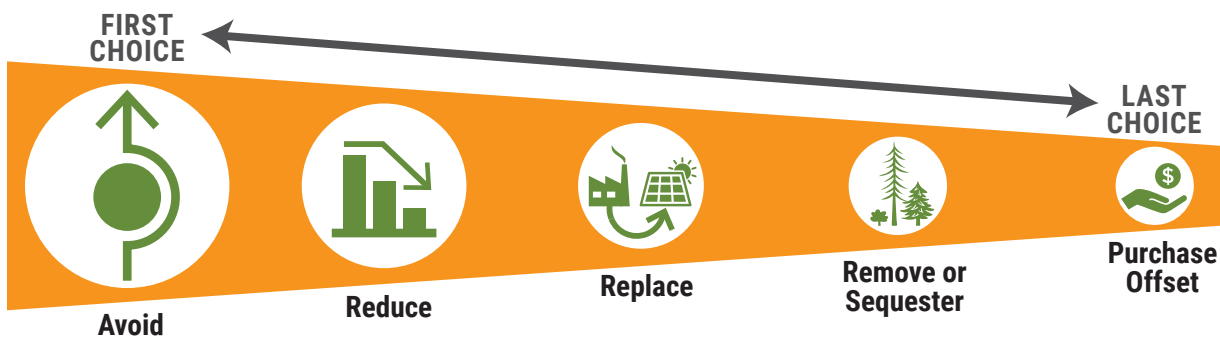
- are the most cost-effective;
- achieve transformative and long term GHG reductions; and
- advance equity, public health, and other environmental benefits such as clean water and improved air quality

**Priorities for tactics.** In its GHG emissions strategies, the County prioritizes the following:

- 1st: Avoid (e.g. by driving fewer miles in government vehicles).
- 2nd: Reduce (e.g. through energy efficiency projects).
- 3rd: Replace (e.g. through cleaner fuel use in vehicles; by transition building energy use from fossil fuel natural gas to electricity; and/or by transitioning electricity supplies to green sources such the PSE's Green Direct program).
- 4th: Remove or sequester, with a preference for investing in County owned projects (e.g. through forest restoration or soil carbon projects).
- Last: Purchase Offsets. As a final option and only in certain cases, purchase externally sourced offsets or credits.



## Greenhouse Gas Emissions Reduction Tactics



### APX 17.B. Sale of Energy, Carbon Offset and Related Attributes

**Carbon and energy projects.** King County agencies are encouraged to develop renewable energy, carbon offset, and related projects. The internal use of the energy or environmental attributes of the projects is encouraged to help achieve operational climate and energy goals.

**Benefits of sale.** King County recognizes that the financial, leadership, public-private partnership, and/or educational values of sale of the energy and carbon and energy attributes may outweigh the benefits of their use towards operational goals.

**Local preference for sale.** If the price between potential buyers is close to equal, King County prefers to sell these attributes to local buyers to support local partnerships.

**No double counting.** Any renewable energy, carbon offset, or other environmental attributes that are sold externally may not also be used to meet the County's operational targets or commitments.

### APX 17.C. Scope of Coverage and Principles for Reinvestment

**Reinvest in climate action.** For County owned projects or programs that sell energy, carbon offsets, or related attributes, revenues beyond project development costs must be reinvested in GHG emissions reduction and climate preparedness actions.

**Covered revenues.** Revenues from the following sales must be reinvested:

- Renewable energy produced
- Renewable energy attributes such as Renewable Energy Certificates (RECs) and Renewable Identification Numbers (RINs)
- Carbon offsets
- Internal carbon and energy fees and set asides
- Credits associated with use of electric vehicles and low carbon fuels

**Reinvestment:** revenues should provide additional funding. Reinvestment of revenues from carbon and energy projects is intended to provide additional funding to accelerate climate action and should not displace existing funding for programs that result in GHG emissions reductions and climate preparedness benefits.

The policy for reinvestment allows for exceptions in cases of financial emergency; is not to affect Rate Stabilization Policies; and is not meant to affect that some revenues are subject to requirements of Federal, State, regional and local laws that require minimum investments in specific programs, demographics, or locations.

## Appendix VI: Community Engagement Summary

*This appendix summarizes the community engagement actions conducted by the King County Climate Action Team as a part of the 2020 SCAP research and development process. The purpose of these engagement efforts was to understand community stakeholder priorities and concerns, and solicit feedback from community members, partners, and County employees on County climate initiatives.*

### Introduction

In preparation for writing the 2020 Strategic Climate Action Plan (SCAP), the King County Climate Action Team worked to ensure that ideas and concerns of community members and stakeholders were heard. Community engagement played an integral role in developing the major themes, goals, and activities in the 2020 SCAP. The County understands that residents and stakeholders feel the impacts of climate change and have valuable insights into what can be done to address climate change.

Multiple avenues were used to reach as many stakeholders as possible. The King County [Community Engagement Continuum](#) outlines a spectrum of ways that local government can engage communities.<sup>1</sup> The Climate Action Team worked to create engagement opportunities at every level so that community members had the opportunity to have a voice in the SCAP development at any point along the spectrum that corresponded to their level of interest and circumstances.

### King County Office of ESJ Community Engagement Continuum

County Informs	County Consults	County Engages in Dialogue	County and Community Work Together	Community Directs Action
King County initiates an effort, coordinates with departments, and uses a variety of channels to inform community to take action.	King County gathers information from the community to inform community-led interventions.	King County engages community members to shape County priorities and plans.	Community and King County share in decision-making to co-create solutions together.	Community initiates and directs strategy and action with participation and technical assistance from King County.

#### Characteristics of Engagement

<ul style="list-style-type: none"> <li>Primarily one-way channel of communication</li> <li>One interaction</li> <li>Term-limited to event</li> <li>Addresses immediate need of County and community</li> </ul>	<ul style="list-style-type: none"> <li>Primarily one-way channel of communication</li> <li>One to multiple interactions</li> <li>Short to medium-term</li> <li>Shapes and informs County programs</li> </ul>	<ul style="list-style-type: none"> <li>Two-way channel of communication</li> <li>Multiple interactions</li> <li>Medium to long-term</li> <li>Advancement of solutions to complex problems</li> </ul>	<ul style="list-style-type: none"> <li>Two-way channel of communication</li> <li>Multiple interactions</li> <li>Medium to long-term</li> <li>Advancement of solutions to complex problems</li> </ul>	<ul style="list-style-type: none"> <li>Two-way channel of communication</li> <li>Multiple interactions</li> <li>Medium to long-term</li> <li>Advancement of solutions to complex problems</li> </ul>
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#### Strategies

Media releases, brochures, pamphlets, outreach to vulnerable populations, ethnic media contacts, translated information, staff outreach to residents, social media	Focus groups, interviews, community surveys	Forums, advisory boards, stakeholder involvement, coalitions, policy development and advocacy, including legislative briefings and testimony, workshops, community-wide events	Co-led community meetings, advisory boards, coalitions, partnerships, policy development and advocacy, including legislative briefings and testimony	Community-led planning efforts, community-hosted forums, collaborative partnerships, coalitions, policy development and advocacy including legislative briefings and testimony
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The County hosted topic-based convenings and youth workshops, responded to requests for presentations, held public workshops, and convened a Climate & Equity Community Taskforce. Online communication was also available through the County's climate website where information about the SCAP update accompanied an online public input survey and an opportunity to request a presentation/workshop.

### Goals of Community Engagement

- King County residents understand what the Strategic Climate Action Plan (SCAP) is.
- Residents share their ideas for how to best prepare for climate impacts based on their knowledge and lived experience.
- County staff listen and understand the priorities of residents around climate change impacts.

## Methods

### Climate Equity Community Taskforce

*The Climate Equity Community Task Force (CECTF)* is a group of leaders who represent frontline communities and organizations across greater King County, bringing multi-ethnic and multi-racial cross-sector experiences to climate-related community-driven actions. The CECTF is made up of approximately 22 community leaders, from sixteen affiliated organizations, who represent frontline communities. These community leaders were brought together to co-create the Sustainable & Resilient Frontline Communities (SRFC) section of the 2020 SCAP. Starting in early 2019, the CECTF members were engaged in meetings with each task force member contributing approximately 70 hours of their time over the year-and-a-half development process of the SRFC framework for action. These meetings included full CECTF meetings, deep dive meetings with CECTF members and King County staff, and presentations by CECTF members of community priorities to King County Climate Leadership Team and Executive Dow Constantine.

### Topic-Based Convenings

Topic-based convenings were held for different action areas covered in the 2020 SCAP. These convenings brought together subject matter experts from the County and private and public sector partner organizations for a deep dive on climate-related issue areas. For example, a green buildings topic-based convening was held, which included County staff, climate experts, permitting staff, construction companies, architects, and environmental consultants; attendees discussed green building strategies to prepare for climate change and reduce greenhouse gas emissions. Throughout the three topic-based convenings (covering green building, energy, and forestry), approximately 150 stakeholders participated.

### Public Workshops

King County hosted three public workshops in Bellevue, the University District, and Des Moines to gather community feedback on climate priorities. The workshops were held at multiple locations to increase accessibility for County residents to attend and share their ideas. At the workshops, community members heard an overview of the SCAP and participated in conversations with topic area experts from the County about specific climate change issue areas. Over 250 people attended the workshops, sharing major concerns and ideas for how the County can best tackle climate change. Youth caucuses were held at two of the workshops in partnership with and led by youth leaders from the Seattle Youth Climate Action Network.

Many residents voiced concerns around the accessibility and inclusion of climate solutions, especially for low-income households and communities of color. Many residents recognized that some proposed climate solutions may not work for everyone. For example, residents want to transition to renewable

energy, but recognized the up-front cost barrier that excludes many low-income households and property managers to participate in this.

Community members made suggestions to mitigate disparities in climate solutions, included subsidizing the cost of solar panels and providing incentives to improve accessibility. Community members also want to see the County conduct further outreach and education around climate change and climate solutions to raise overall community awareness and understanding of the issues. The overall trends for each topic area are captured in the feedback summary below. Many of the concerns and solutions tie back to accessibility, inclusion, outreach, and education, but are unique to each topic area.

Key workshop themes included:

- King County residents want climate solutions to be accessible and inclusive. They recognize that low-income households and communities of color are more likely to face barriers to climate solutions because of cost and other factors.
- Residents want King County to provide education, outreach, resources, subsidies, and incentives so that low income households can partake in climate solutions. If they aren't provided, then it is likely they will be left behind.
- Transition to renewable energy for a greener economy.

## **Comprehensive Plan Meetings**

The Climate Action Team hosted an information table at five Comprehensive Plan public meetings held in 2019. At these meetings, information was shared on climate change related resources, opportunities to share input and feedback for the 2020 SCAP, and how to continue to stay engaged. These public meetings were held in five areas across King County:

- Bear Creek/Sammamish / Snoqualmie Valley Areas;
- Skyway - West Hill Area;
- Four Creeks / Maple Valley / Southeast King Areas;
- Vashon/Maury Island Area; and
- North Highline Area.

## **Youth Workshops**

Youth workshops were held around the County with a primary audience of high school students. Approximately 100 youth were engaged throughout workshops that were supported by partnerships with youth-serving organizations and County high school internship programs. These workshops focused on increasing foundational knowledge of climate change, climate impacts, and climate equity in King County, providing an overview of the SCAP, and sharing what students can do to help combat climate change. Students had the opportunity to share their priorities and voice their major concerns, which informed SCAP development. As mentioned above, youth caucuses were held at two out of the three SCAP public workshops to create the opportunity for students and youth to discuss their priorities.

## **Online Public Input Survey**

An online survey was available on King County's climate website for those who we were unable to participate in in-person engagement opportunities to share their ideas. The survey collected over 650 comments from over 200 participants between June and December of 2019. Some key themes raised in online survey comments included: forest protection, resilience of buildings and infrastructure, and interest in the expansion of public transportation to reduce single-occupant vehicle trips. For a more detailed list of feedback themes, see the [Summary of Feedback and Themes from Community Engagement](#).

## Community Presentations & Workshops

Interested groups or organizations requested climate change presentations and workshops by directly reaching out to the Climate Action Team or through the King County website. County staff tailored presentations to the needs, requests, and the audience for each individual group/organization. These events allowed County staff to go where community members were already meeting and created an opportunity for those individuals to further engage and share insights on climate solutions. This included about 45 presentations that reached over 900 people from communities across King County.

## Internal King County Advisory Committee and Employee Engagement

The Climate Action Team convened three internal advisory teams of representatives from different departments across the County to help guide each section of the SCAP. These teams included the Greenhouse Gas Goal Area Leads, Climate Preparedness Steering Committee, and the SRFC Internal Advisory Committee. County staff provided insights into the operations of different departments and helped prioritize what SCAP activities had the greatest potential for impact across King County. The SRFC internal advisory teams complemented and provided technical support for the Climate Equity Community Task Force. For a full list of County departments represented on the internal teams, please see the [acknowledgements page](#).

To reach other County employees, the Climate Action Team and internal advisory team representatives hosted two employee open houses to provide feedback on SCAP goals, actions, and targets. County employees were also invited to the public workshops, SCAP Lunch-and-Learns, and to provide input through the online survey tool. The Climate Action Team also held advisory committee workshops and topic specific 'deep dive' meetings to solicit additional employee input on the 2020 SCAP development.

## Summary of Feedback and Themes from Community Engagement

Three major themes emerged from the County's engagement with external stakeholders:

1. **Stakeholders are experiencing the impacts of climate change** and desire to see King County act with urgency and leadership to (1) work to get ahead of the risks posed by climate change and (2) support actions and policies that mitigate and reduce climate impacts, including, but not limited to, more aggressive internal requirements, projects and programs that can be modeled, and more aggressive external regulatory policies.
2. **Stakeholders desire more information and involvement** and believe that King County should have a role in supporting the empowerment of communities as active partners in the implementation of external countywide SCAP actions, including, but not limited to, education, toolkits, and other supports.
3. **Stakeholders desire that the County support programs that emphasize equity and co-benefits** to build community resilience and mitigate climate impacts, including forest, green canopy, and open space plans and programs; sustainable and affordable development projects and practices; sustainable local food and agriculture practices and programs; and numerous other programs.

**In addition to these three high-level themes, specific feedback from stakeholders on SCAP topic areas is summarized below.**

## Transportation & Land Use

Key themes for transportation and land among community members are the desire for reduced fares for public transit, more public infrastructure to support electric vehicles (EVs), partnerships with



rideshare and bikeshare companies, and increased transit accessibility in areas that lack reliable and regular transit. Participants noted that mobility is an integral service King County provides and want to see all communities able to access and afford transit services.

Many comments were also shared around EVs and charging stations. Community members believe that more public infrastructure supporting EVs should be made available, including an increased number of charging stations, high powered charging stations, and EV HOV lanes. Additionally, community members noted that EVs are primarily owned by higher-income portions of the population and by only focusing on EV infrastructure and not public transit, low income communities would not be able to utilize these resources. The public seeks a system that balances these concerns.

## **Buildings & Facilities Energy**

Public comments centered around the increased use of solar energy, phasing out carbon-based energy, energy conservation methods like turning off unused lights in buildings, and the need to provide resources and support to the public. Residents are interested in a transition from fossil fuels to renewable energy, with solar energy being called out the most as a substitute. However, community members emphasized the need for incentives or subsidies to be developed for people purchasing solar systems because the upfront costs are high, creating a barrier for low income populations. Participants are also interested in widespread adoption of efficient turn-off practices for lights in buildings as an energy conservation method. Finally, an interest was expressed in increased information, resources, education, and support to the public around energy topics and the benefits of renewable energy, especially for property owners and small businesses.

## **Green Buildings**

Community members shared an interest in the County using more solar and renewable energy, focus on retrofitting existing buildings with sustainable materials to be climate-prepared, and provide information and support to property owners so that they can understand the benefits of “going green.” Community members emphasized the need to meet people “where they are at,” work closely with property managers and providing resources, incentives, and funding that they will be able to successfully green buildings and lower and phase out carbon emissions.

## **Consumptions & Materials Management**

Three key takeaways from discussions around consumption and materials management were: (1) regulating waste, (2) increasing education, and (3) incentivizing sustainable practices in daily life. Community members want to ensure that recyclable and compostable items do not end up in landfills. There was also a call for educating the public on what items are recyclable, compostable, reusable, and what should go to the landfill. More education was noted as an idea to address the concern of regulating waste; by putting more resources into education, people will be more likely to self-regulate their disposal practices. Lastly, residents are interested in the widespread adoption of sustainable practices in daily life and making these practices affordable. For example, the banning of single use plastic items or allowing people to bring their own reusable containers to shops and businesses or providing assistance to people interested in composting services.

## **Forest & Agriculture**

Community members shared feedback around agriculture in the County and methods for planting and protecting trees. Many ideas around agricultural practices and the use of a regenerative approach to agriculture were shared to prepare for climate impacts around food security. Specifically, ideas around sequestering carbon, increasing soil health, and decreasing runoff. Residents shared views on both urban and rural agriculture, however comments primarily focused on making agriculture accessible

to urban and underserved populations. Another key theme was the desire for increased tree planting in the County, and an interest in data showing how many trees have been removed, protected, and planted.

### **Community Resilience & Climate Equity**

Community members emphasized the importance of taking action to address climate justice by including climate solutions for vulnerable communities that are disproportionately impacted by climate change. The major concerns community members voiced were around climate change impacts having disproportionate impacts on BIPOC communities and the needs around food security, affordable housing, green jobs, emergency resources, renewable energy sources, reliable public transportation, and access to green space that make BIPOC communities more vulnerable to climate change impacts. Community members voiced that the County needs to do more outreach, in-language communication, and partnering with frontline communities, as well as engaging more with youth to provide education and opportunities. Partnering with frontline communities is important to community members, and participant emphasized that King County needs to include BIPOC voices in discussions that inform policies and programs that have a high level of impact on BIPOC communities. Many community members underscored the importance of including youth voices in climate action and proposed that King County partner with K-12 schools and youth-serving organizations to educate students on climate impacts and provide opportunities to youth to be involved in the decision-making process (e.g., internships).

### **Preparing for Climate Impacts**

Community members shared heightened concern around extreme climate events, such as sea level rise and wildfires, due to the increasing frequency of these events. To increase community preparedness, residents are interested to see the County engage and educate property owners, developers, and community members to increase understanding of the potential impacts and better equip the community to prepare. Community members also shared comments around the creation and endorsement of policy-related climate action plans, especially options that push for all King County cities to adopt climate plans and be accountable for upholding them.

### **Climate Change & Health**

Key concerns raised by community members related to air quality, food and nutritional security, and health equity. With the increased frequency of wildfires, smoke has exacerbated air quality in the region during fire events, worsening existing respiratory issues. Food and nutritional security were also raised as pressing concerns. Residents want access to nutritional food, especially in the event of food shortages (e.g., due to chronic effects of climate change, or acute events like a pandemic). Many residents worry about negative health consequences of food shortages at food banks, a crosscutting health equity concern. Those who will be most impacted by the outcomes of climate change are frontline communities. Residents asked, “How can the County address this inequitable distribution of effects so that all residents of King County can live a healthy life?”

## Summary of Feedback Themes from County Staff Engagement

In addition to providing technical expertise and input into the topics described above in the community input summary, King County Staff engagement yielded six priority areas for collaboration. Collectively, these ideas and themes provided strategic insight into how the County should work to reduce climate change risks to King County communities, natural systems, and County operations and services.

1. Integrate climate change information across County processes.
2. Invest in research and technical studies to inform climate preparedness decisions.
3. Move forward on early implementation actions that reduce risks.
4. Strengthen internal and external partnerships.
5. Increase outreach, engagement, and technical assistance to residents.
6. Follow through on committed actions to reduce disproportionate impacts of climate change on frontline communities.

### Appendix VI Endnote

- 1 King County. (May 2011). [Community Engagement Guide](#).